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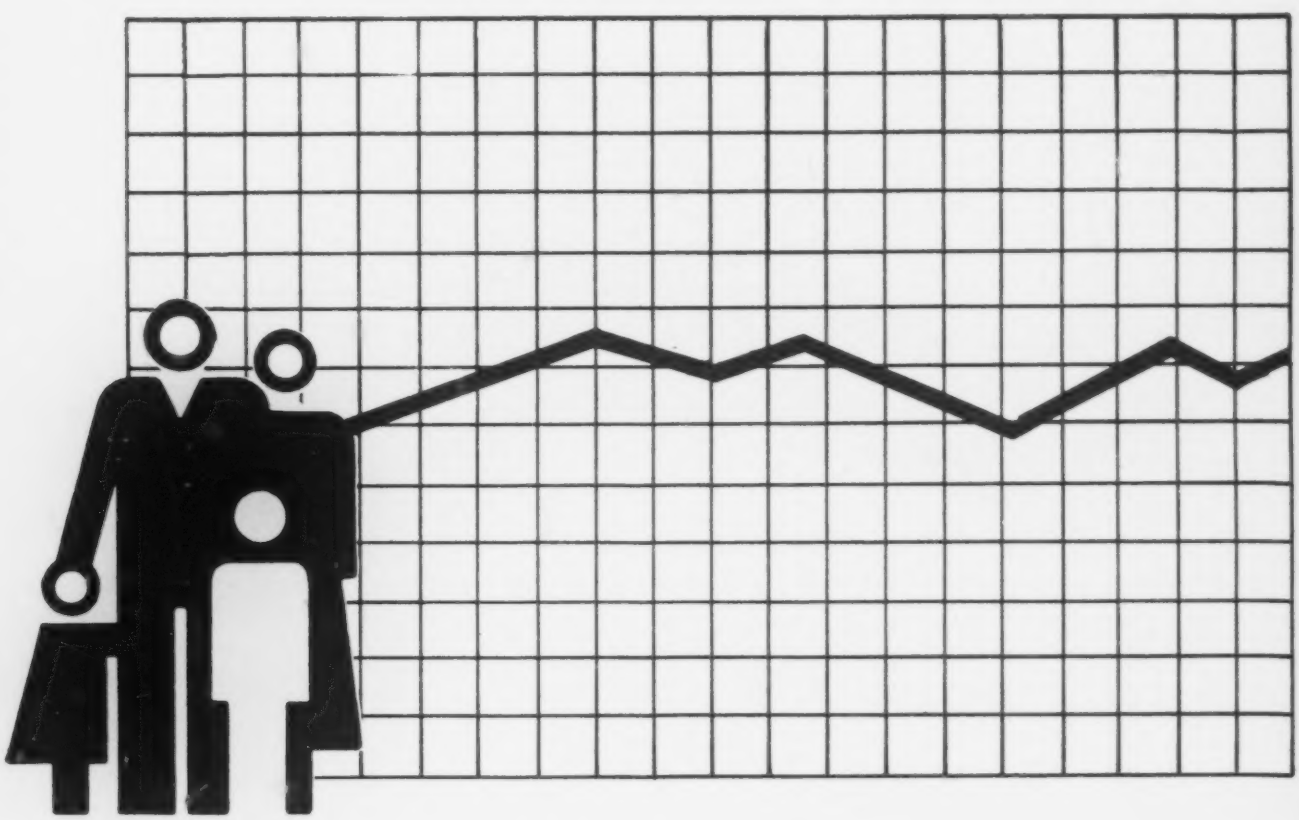
NORTH DAKOTA VITAL STATISTICS REPORT

1987



North Dakota State Department of Health and Consolidated Laboratories

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Introduction

The 1987 edition of the North Dakota Vital Statistics Report is a statistical summary of births, deaths, fetal deaths, marriages, divorces and annulments, and induced terminations of pregnancy. The summary's major purpose is to present information which can be utilized as a basis for health policy and planning decisions and as a primer for epidemiologic investigation.

Although a majority of the information contained in this report pertain to events occurring in 1987, some data for prior years has been included to illustrate trends.

Data for this summary are gleaned from the certificates of live birth, death, fetal death, induced termination of pregnancy, marriage and divorce, and annulment.

Any comments or suggestions concerning the content or format for this report are welcome, and any subsequent data needs should be directed to the Administrative Services Section, North Dakota State Department of Health and Consolidated Laboratories, Second Floor, Judicial Wing, State Capitol, Bismarck, North Dakota 58505, (701) 224-2392.

Definitions, Rates, and Ratios

Definitions

BIRTH WEIGHT - Weight of infant or fetus at time of delivery (normally recorded in pounds and ounces and/or grams).

FETAL DEATH - Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through at least the 20th week of gestation; the fetus shows no signs of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

GESTATIONAL PERIOD - Number of weeks elapsed between the first day of the last menstrual period and date of delivery.

HEBDOMADAL DEATH - Death occurring to an individual less than 7 days of age.

ILLEGITIMATE BIRTHS - Birth occurring to a mother who is not married at the time of conception, at the time of birth, or at any time between conception and birth.

INDUCED TERMINATION OF PREGNANCY - The termination of human pregnancy with an intention other than to produce a live birth or to remove a dead embryo or fetus.

INFANT DEATH - Death occurring to an individual less than 1 year of age.

LEADING CAUSES OF DEATH - Deaths are grouped into categories dependent upon the underlying cause of death. Ranks are assigned by organizing these categories according to the number of deaths in each category from most frequent to least.

LIVE BIRTH - The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

LOW WEIGHT BIRTH - Birth wherein the birth weight is equivalent to 2,500 grams or less (approximately 5 lbs., 8 oz.).

MATERNAL DEATHS - Those deaths wherein the physician has designated a maternal condition as the underlying cause of death.

MEAN - The average of a set of values, equal to the sum of the values divided by the number of values.

MEDIAN - The central value of a distribution of values wherein the same percentage of observations are above this point as are below.

NEONATAL DEATH - Death occurring to individuals less than 28 days of age.

OCCURRENCE - Place where the event actually occurred.

PERINATAL DEATH - Fetal death and deaths less than 28 days of age.

PERINATE - Fetus or newborn during the perinatal period (from the end of the 20th week of gestation to the 28th day after birth).

RACE - Race for mother, father, or decedent is as stated on particular certificate. Race of child is determined from the race of the parents.

RESIDENCE - Usual place of residence for person to whom event occurred. For births and fetal deaths residence is defined as the mother's usual place of residence.

TOTAL BIRTHS - Live births and fetal deaths.

UNDERLYING CAUSE OF DEATH - That condition giving rise to the chain of events leading to death.

Rates and Ratios

CAUSE-SPECIFIC DEATH RATE - Number of deaths due to a specific cause divided by the total resident population X 100,000.

CRUDE BIRTH RATE - Number of resident live births divided by the total resident population X 1,000.

CRUDE DEATH RATE - Number of resident deaths divided by the total resident population X 1,000.

DIVORCE RATE - Number of divorces and annulments divided by the total resident population X 1,000.

FETAL DEATH RATE - Number of resident fetal deaths divided by the total resident live births and resident fetal deaths X 1,000.

FETAL DEATH RATIO - Number of resident fetal deaths divided by the total resident live births X 1,000.

ILLEGITIMACY RATIO - Number of resident illegitimate live births divided by total resident live births X 1,000.

INFANT MORTALITY RATE - Number of infant deaths divided by the total resident live births X 1,000.

LOW WEIGHT BIRTH RATIO - Number of low weight births divided by the total resident live births X 1,000.

MARRIAGE RATE - Number of marriages divided by the total resident population X 1,000.

MATERNAL DEATH RATE - Number of maternal deaths divided by the total resident live births X 10,000

NEONATAL DEATH RATE - Number of neonatal deaths divided by the total resident live births X 1,000.

NO PRENATAL CARE RATIO - Number of live births to mothers with no prenatal care divided by the total resident live births X 1,000.

PERINATAL DEATH RATE - Number of perinatal deaths divided by the total resident live births and the total resident fetal deaths X 1,000.

Reliability of Rates

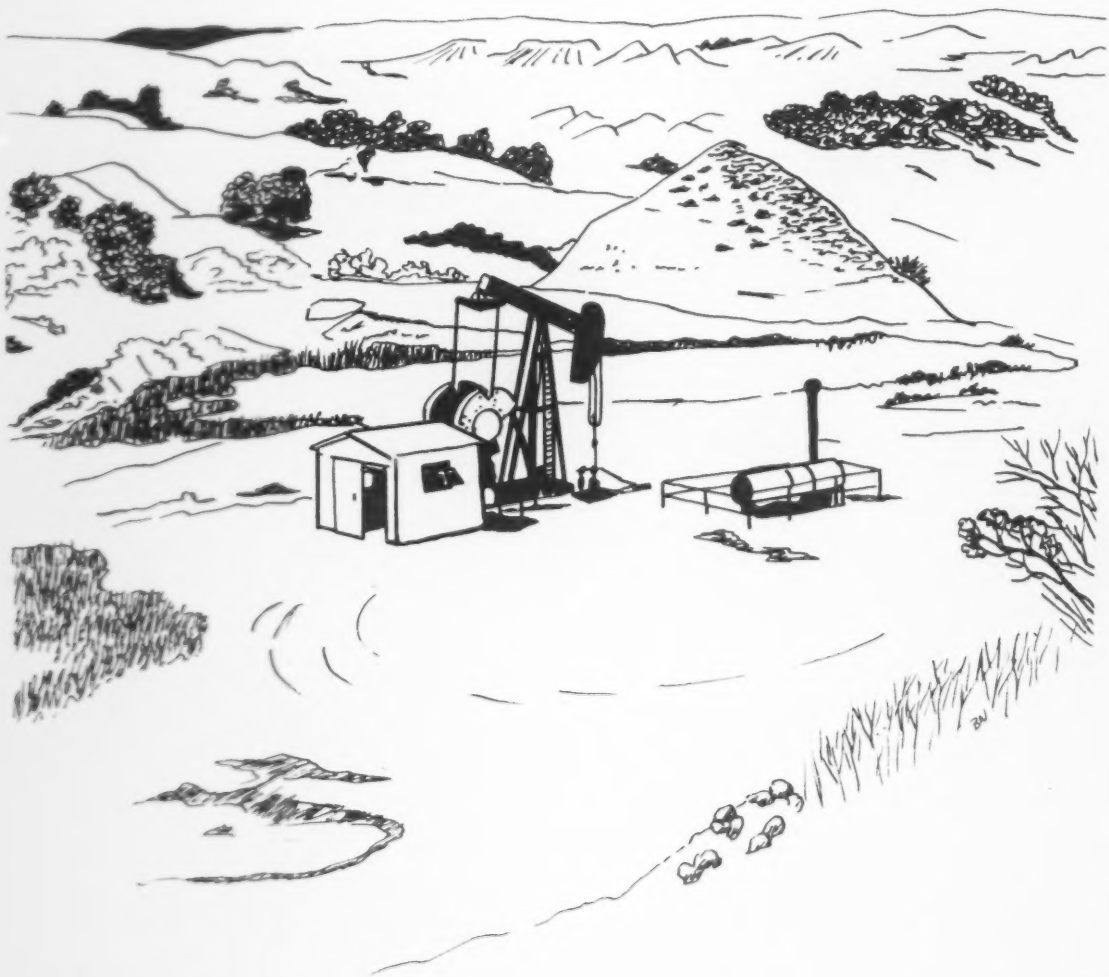
Precautions should be taken in drawing specific inferences from comparisons of rates for different geographic areas or different periods of time. Rates based on a small number of events or for a small geographic area tend to exhibit considerable variation from time period to time period or place to place. Excessive variation in rates not only negates their utility as estimators of the probability of an event occurring, but also their usefulness for comparative purposes. In addition, the reader should recognize the limitations of using unadjusted rates in attempting to attribute rate differences to particular factors. For example, the reader should not attempt to state that there was a significant difference in rates for two geographic areas for diseases of the heart without first adjusting the rates to negate the effects of differing age distributions in the two areas. Many times there are simply not sufficient data available to adequately adjust rates for all possible compounding factors. For this reason, the reader should exercise diligence and caution while attempting to draw substantive conclusions when comparing vital statistics rates.

Qualifications and Limitations of Data and Calculations

COMPARABILITY IN CAUSE-OF-DEATH STATISTICS

The reader must bear in mind two major limitations in interpreting changes in cause-of-death statistics. Changes in nomenclature and the classification scheme (The International Classification of Diseases) and changes in diagnostic practices may seriously affect the comparability of such statistics over time. The International Classification of Diseases is modified approximately once every ten years to reflect changing medical opinion and practice. More accuracy may be obtained when comparing cause-of-death certificates which are coded via one revision of the International Classification of Diseases and utilizing the coding practices and procedures in effect at that time.

In order to compare cause-of-death statistics from one revision to the next it is necessary to apply a ratio of comparability. Such ratios are developed by comparing the number of deaths assigned to a certain condition or group of conditions under one revision to the number assigned under another revision of the International Classification of Diseases.



Natality:
An Overview 1987

Total Resident Live Births	10,303
Crude Birth Rate	15.3
Median Live Birth Weight (Grams)	3,478
Low Weight Live Births	506
Low Weight Birth Ratio	49.1

Live Births

Between 1960 and 1987 the number of North Dakota resident live births varied considerably (Figure 1.1 and Table 1.1). The smallest number of resident live births recorded since 1960 was 9,738 in 1973, while the largest number occurred in 1960, a year in which 16,690 resident live births were reported. During the same time period crude birth rates also varied considerably (Figure 1.2 and Table 1.1). The largest crude birth rate was experienced in 1960 (26.4), while the smallest corresponding rate was reported in 1987 (15.3).

Figure 1.1
Resident Live Births
North Dakota, 1960-1987

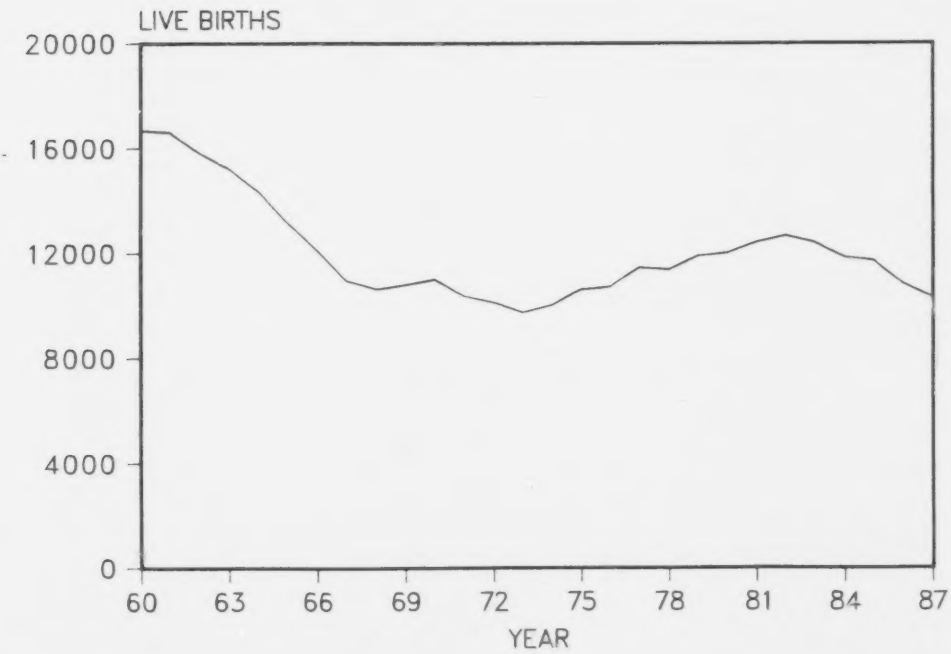


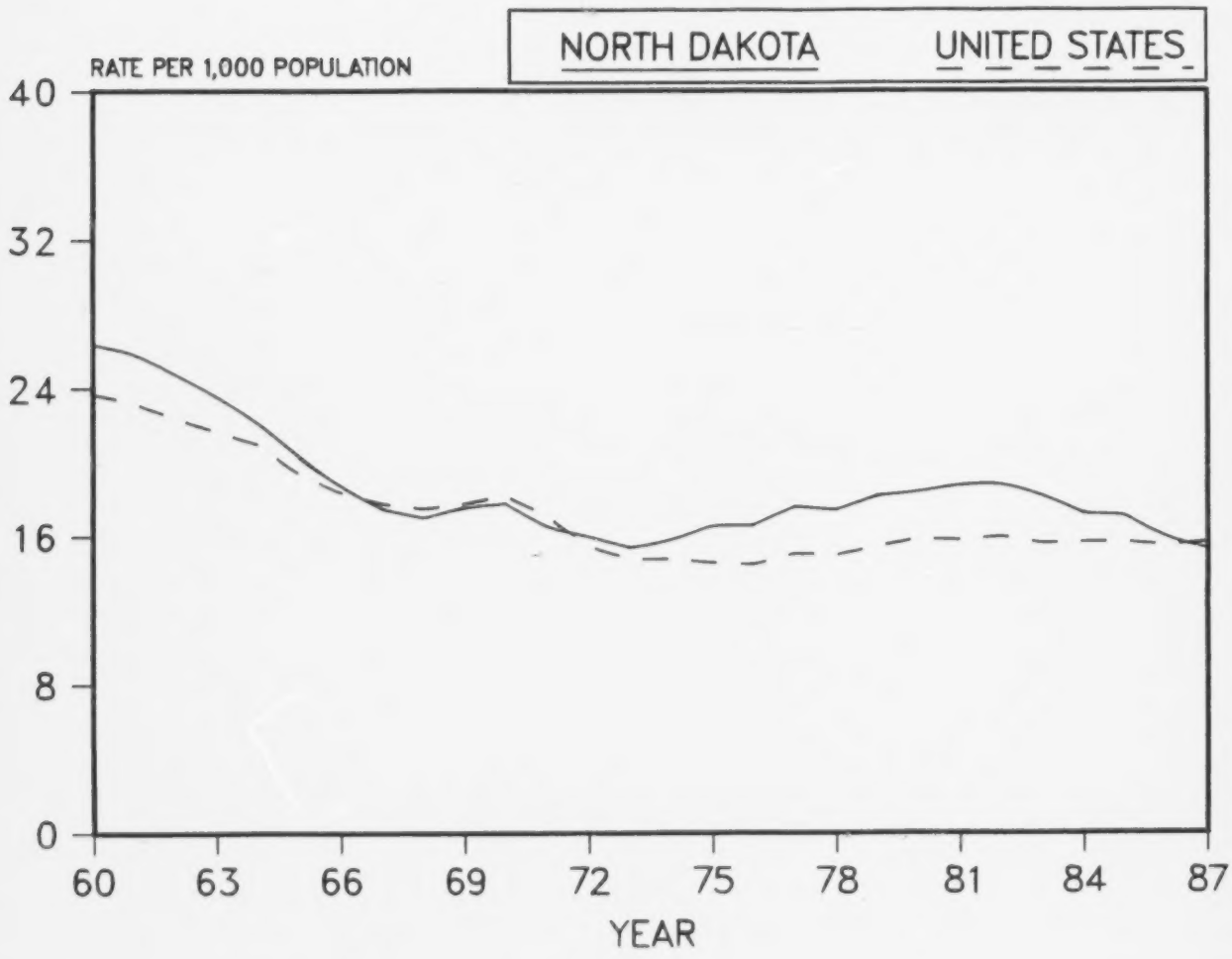
Table 1.1
Resident Live Births and Crude Birth Rates
North Dakota and United States
1960-1987

Year	United States		North Dakota	
	Live Births	Crude Birth Rate	Live Births	Crude Birth Rate
1960	4,257,850	23.7	16,690	26.4
1961	4,268,326	23.2	16,615	25.9
1962	4,167,362	22.4	15,842	24.8
1963	4,098,020	21.7	15,257	23.6
1964	4,027,490	21.0	14,405	22.2
1965	3,760,358	19.4	13,198	20.3
1966	3,606,274	18.4	12,159	18.7
1967	3,520,959	17.8	10,962	17.5
1968	3,501,564	17.5	10,631	17.0
1969	3,600,206	17.8	10,798	17.6
1970	3,731,386	18.2	11,004	17.8
1971	3,555,970	17.1	10,361	16.5
1972	3,258,411	15.5	10,115	16.0
1973	3,136,965	14.8	9,738	15.4
1974	3,159,958	14.8	10,010	15.8
1975	3,144,198	14.6	10,624	16.6
1976	3,167,788	14.5	10,724	16.6
1977	3,326,632	15.1	11,450	17.6
1978	3,333,279	15.0	11,347	17.4
1979	3,494,398	15.5	11,883	18.2
1980	3,612,258	15.9	11,995	18.4
1981	3,629,238	15.8	12,407	18.8
1982	3,680,537	15.9	12,655	18.8
1983	3,638,933	15.6	12,380	18.2
1984	3,669,141	15.7	11,833	17.2
1985	3,760,561	15.7	11,697	17.1
1986	3,731,000(1)	15.5	10,824	15.9
1987	3,829,000(1)	15.7	10,303	15.3

(1) U.S. Estimate

Generally, state and national live birth frequency and crude birth rate patterns have been similar. These patterns showed a steady decline from 1960 through 1968, slight fluctuation from 1969 to 1973, and steady increase from 1973 through 1982. However, in 1983 through 1987, both North Dakota resident live birth frequencies and crude birth rates declined, a reversal of the 1973-1982 pattern of increase. Generally, since 1960, North Dakota's crude birth rates were higher than corresponding national rates.

Figure 1.2
Resident Live Birth Rates
North Dakota and United States
1960-1987



Racial Composition

During the 1978-1987 time period the racial composition of North Dakota resident live births changed slightly. White births declined from 92.0 percent to 88.1 percent of total live births, while non-white resident live births rose from 8.0 percent to 11.9 percent (Table 1.2).

Table 1.2
Resident Live Births by Race of Infant
North Dakota, 1978-1987

Year	Total Live Births		White		Native American		Other	
	Number	Percent of All Births	Number	Percent of All Births	Number	Percent of All Births	Number	Percent of All Births
1978	11,347	100.0	10,435	92.0	745	6.6	167	1.5
1979	11,883	100.0	10,938	92.0	766	6.4	179	1.5
1980	11,995	100.0	10,935	91.2	864	7.2	196	1.6
1981	12,407	100.0	11,230	90.5	973	7.8	204	1.6
1982	12,655	100.0	11,395	90.0	1,034	8.2	226	1.8
1983	12,380	100.0	11,129	89.9	1,023	8.3	228	1.8
1984	11,833	100.0	10,639	89.9	962	8.1	232	2.0
1985	11,697	100.0	10,441	89.3	1,013	8.7	243	2.1
1986	10,824	100.0	9,624	88.9	984	9.1	216	2.0
1987	10,303	100.0	9,080	88.1	971	9.4	252	2.4

Age of Mother

In 1987, 36.2 percent of all resident live births were to mothers less than 25 years of age (Table 1.3) as compared with 50.0 percent reported in 1978. The median age for all mothers was 27, while the corresponding medians for white mothers and Native American mothers were 27 and 24, respectively (Table 1.3).

Table 1.3
Resident Live Births by Age of Mother and Race of Infant
North Dakota, 1987

Age of Mother	Race of Infant							
	Total		White		Native American		Other	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Under 15 Years	8	0.1	2	0.0	6	0.6	--	--
15-19 Years	776	7.5	567	6.2	193	19.9	16	6.3
20-24 Years	2,951	28.6	2,514	27.7	354	36.5	83	32.9
25-29 Years	3,882	37.7	3,546	39.1	256	26.4	80	31.7
30-34 Years	2,073	20.1	1,898	20.9	120	12.4	55	21.8
35-39 Years	536	5.2	485	5.3	35	3.6	16	6.3
40-44 Years	67	0.7	59	0.6	6	0.6	2	0.8
45 Years and Over	8	0.1	7	0.1	1	0.1	--	--
Not Stated	2	0.0	2	0.0	--	--	--	--
Total	10,303	100.0	9,080	100.0	971	100.0	252	100.0
Median Age of Mother	27		27		24		27	

Prenatal Care

For the 10,303 live born infants in 1987, prenatal care was initiated most often in the first trimester of pregnancy. This accounted for 80.5 percent of all women having live births. The most common number of prenatal visits fell within the interval 10-14. Tables 1.4 and 1.5 indicate the trimester prenatal care began and the number of prenatal visits.

During 1987, 56 resident live births or 5.4 of every 1,000 live births occurred without the mother having any prenatal care (Tables 1.4 and 1.5).

Table 1.4
Resident Live Births by Trimester
Prenatal Care Began and Race of Mother
North Dakota, 1987

Trimester Prenatal Care Began	Race of Mother							
	All Races		White		Native American		Other	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
None	56	0.5	35	0.4	21	2.5	--	--
First	8,292	80.5	7,617	82.2	513	61.9	162	77.5
Second	1,491	14.5	1,250	13.5	207	25.0	34	16.3
Third	244	2.4	166	1.8	71	8.6	7	3.3
Not Stated	220	2.1	197	2.1	17	2.1	6	2.9
Total	10,303	100.0	9,265	100.0	829	100.0	209	100.0

Table 1.5
Resident Live Births by Number
of Prenatal Visits and Race of Mother
North Dakota, 1987

Number of Prenatal Visits	Race of Mother							
	All Races		White		Native American		Other	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
None	56	0.5	35	0.4	21	2.5	--	--
1-4	416	4.0	256	2.8	153	18.5	7	3.3
5-9	3,485	33.8	3,135	33.8	313	37.8	37	17.7
10-14	5,344	51.9	4,955	53.5	273	32.9	116	55.5
15-19	752	7.3	670	7.2	45	5.4	37	17.7
20+	114	1.1	95	1.0	15	1.8	4	1.9
Not Stated	136	1.3	119	1.3	9	1.1	8	3.8
Total	10,303	100.0	9,265	100.0	829	100.0	209	100.0

Table 1.6
Resident Live Births With No Prenatal Care
by Age and Race of Mother
North Dakota, 1987

Age of Mother	Race of Mother							
	Total		White		Native American		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Under 15 Years	3	375.0	1	500.0	2	333.3	--	--
15-19 Years	18	23.2	12	20.6	6	33.0	--	--
20-24 Years	13	4.4	7	2.7	6	19.9	--	--
25-29 Years	11	2.8	9	2.5	2	9.8	--	--
30-34 Years	5	2.4	2	1.0	3	30.0	--	--
35-39 Years	5	9.3	3	6.1	2	62.5	--	--
40-44 Years	--	--	--	--	--	--	--	--
45 Years and Over	1	125.0	1	142.9	--	--	--	--
Total	56	5.4	35	3.8	21	25.3	0	0.0

Birth Weight

In 1987 the median birth weight for all North Dakota resident live births was 3,478 grams or approximately 7 pounds, 10 ounces (Table 1.7). A subgroup of major importance when analyzing birth weights is the infant weighing 2,500 grams or less (approximately 5 pounds, 8 ounces) at birth. Such infants have historically experienced higher mortality rates in their first year than those born with greater birth weight. In 1987, 506 total live births were at or below 2,500 grams or approximately 49 of every 1,000 live births.

The proportion of low weight infants varies with the race and age of the mother and the amount of prenatal care she has received. Tables 1.8 and 1.9 present data on these three variables with respect to birth weight.

Table 1.7
Resident Live Births by
Birth Weight and Race of Infant
North Dakota, 1987

Weight (In Grams)	Total	Race of Infant		
		White	Native American	Other
0-500	19	17	1	1
501-1,000	32	28	3	1
1,001-1,250	22	20	2	--
1,251-1,500	14	12	1	1
1,501-1,750	45	38	7	--
1,751-2,000	59	50	8	1
2,001-2,250	116	101	12	3
2,251-2,500	199	171	22	6
2,501-2,750	366	312	46	8
2,751-3,000	870	756	78	36
3,001-3,500	3,577	3,168	303	106
3,501-4,000	3,502	3,097	333	72
4,001-4,500	1,238	1,100	123	15
4,501-5,000	214	184	29	1
5,001 and Over	27	23	3	1
Not Stated	3	3	--	--
Total	10,303	9,080	971	252
Median Weight	3,478	3,480	3,506	3,326

Table 1.8
Resident Low Weight[1] Live Births and Low Birth Weight Ratios by Age of Mother and Race of Infant
North Dakota, 1987

Age of Mother	Race of Infant							
	All Races		White		Native American		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Under 15 Years	1	125.0	--	--	1	166.7	--	--
15-19 Years	57	73.5	43	75.8	12	62.2	2	125.0
20-24 Years	135	45.7	114	45.3	18	50.8	3	36.1
25-29 Years	177	45.6	165	46.5	10	39.1	2	25.0
30-34 Years	94	45.3	79	41.6	10	83.3	5	90.9
35-39 Years	39	72.8	34	70.1	4	114.3	1	62.5
40-44 Years	1	14.9	1	16.9	--	--	--	--
45 Years and Over	2	250.0	1	142.9	1	1000.0	--	--
Total	506	49.1	437	48.1	56	57.7	13	51.6

[1] 2,500 Grams or Less

Table 1.9
Resident Low Weight[1] Live Births and Low Birth Weight Ratios by Prenatal Visits and Race of Mother
North Dakota, 1987

Number of Prenatal Visits	Race of Mother							
	All Races		White		Native American		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
None	11	196.4	8	228.6	3	142.9	--	--
1-4	62	149.0	45	175.8	15	98.0	2	285.7
5-9	255	73.2	227	72.4	23	73.5	5	135.1
10-14	127	23.8	121	24.4	5	18.3	1	8.6
15-19	19	25.3	16	23.9	1	22.2	2	54.1
20+	5	43.9	4	42.1	1	66.7	--	--
Not Stated	27	--	23	--	3	--	1	--
Total	506	49.1	444	47.9	51	61.5	11	52.6

[1] 2,500 Grams or Less

Attendant at Birth

Data presented in Table 1.10 indicate nearly 98 percent of the resident live births were attended by a physician, either a M.D. or D.O. In addition, there were 160 live births attended by midwives and 77 live births attended to by registered nurses.

Table 1.10
Resident Live Births by Type of Attendant
North Dakota, 1987

Attendant	Number	Percent
Physician, M.D.	10,006	97.1
Physician, D.O.	37	0.4
Registered Nurse	77	0.7
Parent	17	0.2
Other	6	0.1
Midwife	160	1.6
Total	10,303	100.0

Illegitimate Live Births

Between 1960 and 1987 the number of North Dakota resident illegitimate live births increased substantially (Figure 1.3 and Table 1.11). The smallest number of resident illegitimate live births recorded since 1960 was 423 in 1961, while the largest corresponding frequency was 1,427 in 1987. During the same time period, illegitimacy ratios, which expresses illegitimate live births per 1,000 total live births, has also increased substantially (Figure 1.4 and Table 1.11). The smallest ratio was 25.5 experienced in 1961, while the largest corresponding figure was 138.5 reported in 1987.

Figure 1.3
Resident Illegitimate Live Births
North Dakota, 1960-1987

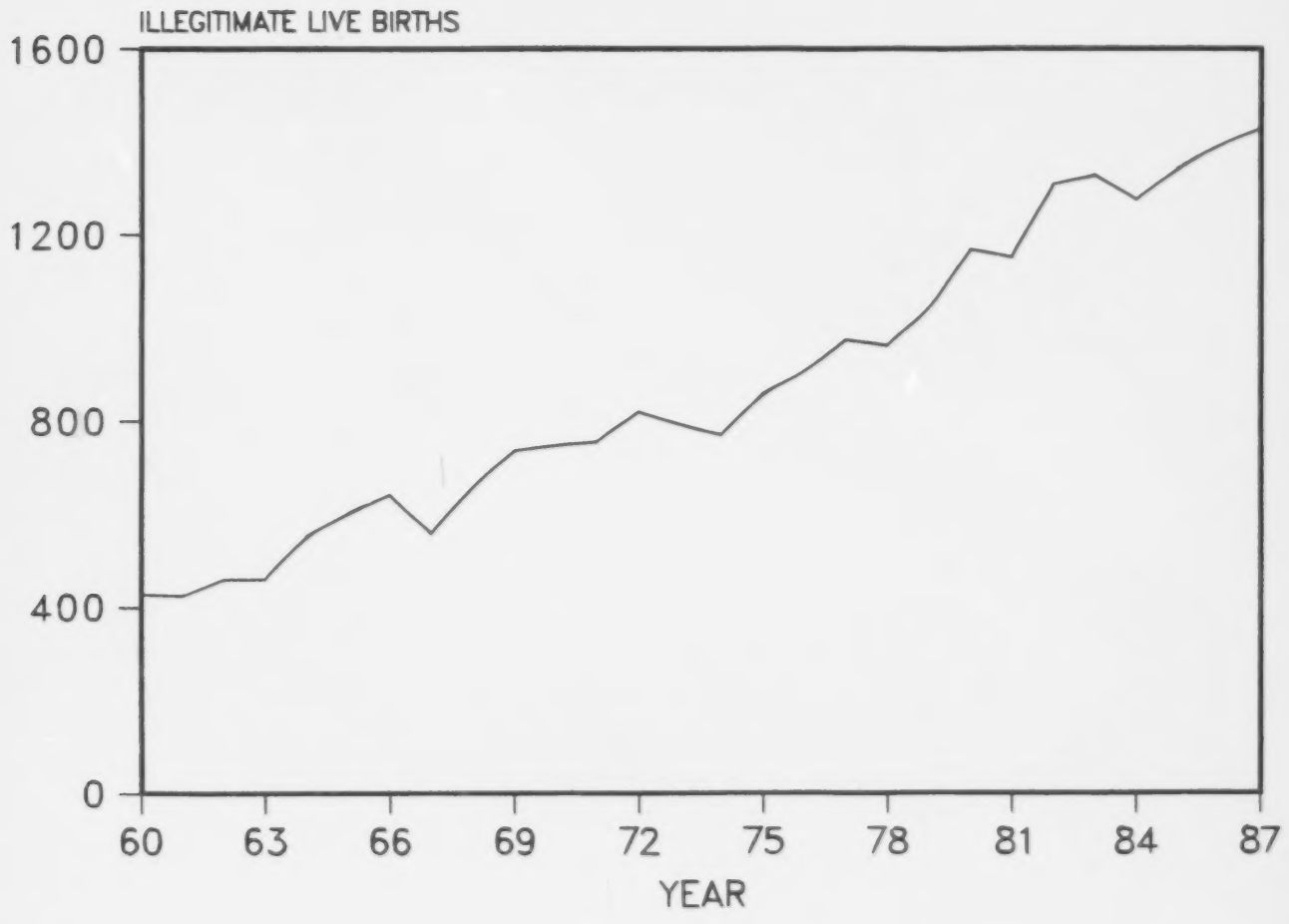
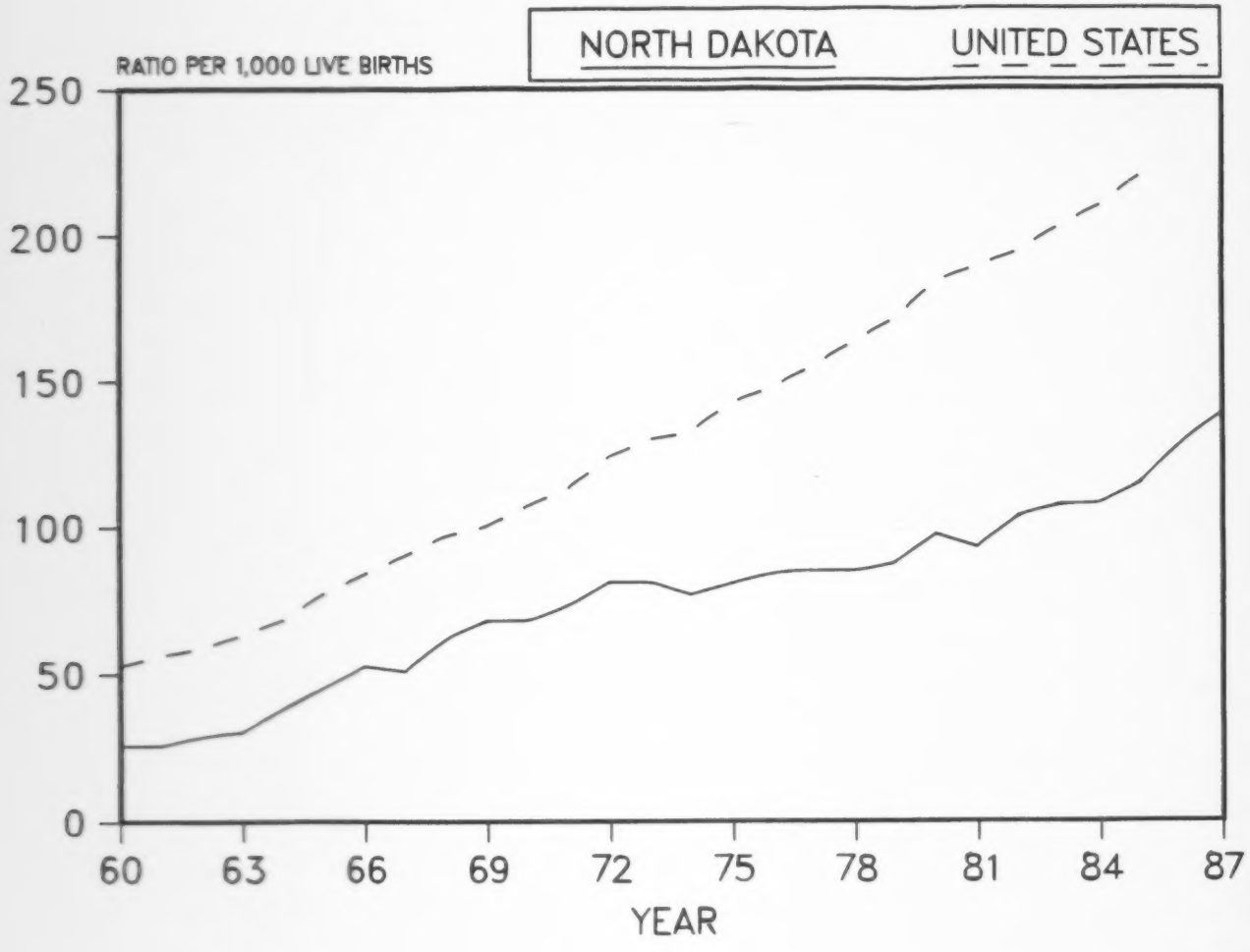


Table 1.11
Resident Illegitimate Live Births and
Illegitimacy Birth Ratios
North Dakota and United States
1960-1987

Year	United States		North Dakota	
	Illegitimate Births	Illegitimacy Ratio	Illegitimate Births	Illegitimacy Ratio
1960	224,300	52.7	427	25.6
1961	240,200	56.3	423	25.5
1962	245,100	58.8	460	29.0
1963	259,400	63.3	460	30.2
1964	275,700	68.5	552	38.3
1965	291,200	77.4	601	45.5
1966	302,400	83.9	641	52.7
1967	318,100	90.3	556	50.7
1968	339,200	96.9	659	62.0
1969	360,800	100.2	735	68.1
1970	398,700	106.9	748	68.0
1971	401,400	112.9	754	72.8
1972	403,200	123.7	819	81.0
1973	407,300	129.8	790	81.1
1974	418,100	132.3	768	76.7
1975	447,900	142.5	858	80.7
1976	468,100	147.8	904	84.3
1977	515,700	155.0	974	85.1
1978	543,900	163.2	961	84.7
1979	597,800	171.1	1,040	87.5
1980	665,747	184.3	1,168	97.4
1981	686,605	189.2	1,150	92.7
1982	715,227	194.3	1,308	103.4
1983	737,893	202.8	1,328	107.3
1984	770,355	210.0	1,274	107.7
1985	828,174	220.2	1,342	114.7
1986	--(1)	--	1,393	128.7
1987	--(1)	--	1,427	138.5

(1) Not Available

Figure 1.4
Resident Illegitimate Birth Ratios
North Dakota and United States
1960-1987



Generally, state and national illegitimate frequency and illegitimate ratio patterns have been similar, that is, substantially increasing throughout the 1960-1987 time period. Although both have trended upward, North Dakota illegitimacy ratios have been much lower than corresponding national ratios.

Table 1.12
Resident Illegitimate Live Births
and Illegitimacy Ratio by Age of Mother
North Dakota, 1987

Age of Mother	Total Live Births	Illegitimate Births	Illegitimacy Ratio
Under 15 Years	8	8	1,000.0
15-19 Years	776	462	595.4
20-24 Years	2,951	556	188.4
25-29 Years	3,882	244	62.9
30-34 Years	2,073	117	56.4
35-39 Years	536	35	65.3
40-44 Years	67	4	59.7
45 Years and Over	8	1	125.0
Not Stated	2	--	--
Total	10,303	1,427	138.5

Congenital Anomalies

Congenital anomalies were reported in 167 of the 10,303 resident live births in 1987 (Table 1.13). This translates to a rate of 1,620.9 per 100,000 live births. "Congenital anomalies of the genital organs" was the most frequent reported occurring at a rate of 271.8 per 100,000 live births and comprising 16.8 percent of all anomalies mentioned. The frequency of reporting specific anomalies is affected by the reporting cycle. Many conditions may or may not be apparent at birth when the birth certificate is completed.

Table 1.13
Resident Congenital Anomalies and
Associated Rates by Types of Anomaly
North Dakota, 1987

Type of Anomaly	ICDA Code	Number of Conditions	Rate Per 100,000 Live Births
Anencephalus and Similar Anomalies	740	1	9.7
Other Congenital Anomalies of the Nervous System	742	6	58.2
Congenital Anomalies of the Eye	743	1	9.7
Bulbus Cordis Anomalies and Anomalies of the Cardiac Septal Closure	745	3	29.1
Other Congenital Anomalies of the Heart	746	6	58.2
Other Congenital Anomalies of the Circulatory System	747	3	29.1
Congenital Anomalies of the Respiratory System	748	1	9.7
Cleft Palate and Cleft Lip	749	17	165.0
Other Congenital Anomalies of Upper Alimentary Tract	750	4	38.8
Other Congenital Anomalies of the Digestive System	751	6	58.2
Congenital Anomalies of the Genital Organs	752	28	271.8
Congenital Anomalies of the Urinary System	753	5	48.5
Certain Congenital Musculoskeletal Deformities	754	20	194.1
Other Congenital Anomalies of the Limbs	755	24	232.9
Other Congenital Musculoskeletal Anomalies	756	10	97.1
Congenital Anomalies of the Integument	757	19	184.4
Chromosomal Anomalies	758	8	77.6
Other and Unspecified Congenital Anomalies	759	5	48.5
Total		167	1,620.9

7

Mortality:
An Overview 1987

Total Resident Deaths	5,476
Crude Death Rate	8.1
Total Resident Fetal Deaths	55
Fetal Death Ratio	5.3
Infant Deaths	90
Infant Death Rate	8.7
Neonatal Deaths	50
Neonatal Death Rate	4.9
Perinatal Deaths	105
Perinatal Death Rate	10.1
Maternal Deaths	1
Maternal Death Rate	1.0

Deaths

Between 1960 and 1987 the number of deaths occurring to North Dakota residents increased from 5,449 to 5,476 (Figure 2.1). However, during the same time period the crude death rate declined, from 8.6 to 8.1. The lowest crude death rate was recorded in 1986 (7.8), while the highest corresponding rates were observed in 1969, 1970, 1973, and 1974 (a rate of 9.1) (Figure 2.2 and Table 2.1).

Generally, state and national crude death rates have followed similar trends, ones of slight decline, during the 1960-1987 time period. Although state and national crude death rates have followed similar patterns, generally, North Dakota's crude death rates have been lower than corresponding national rates (Figure 2.2 and Table 2.1).

Of the 5,476 North Dakota resident deaths reported in 1987, 3,035 were male, 2,441 were female.

The most frequent number of deaths occurred to individuals 80-84 years of age and the least number to persons aged 5-9.

Figure 2.1
Resident Deaths
North Dakota, 1960-1987

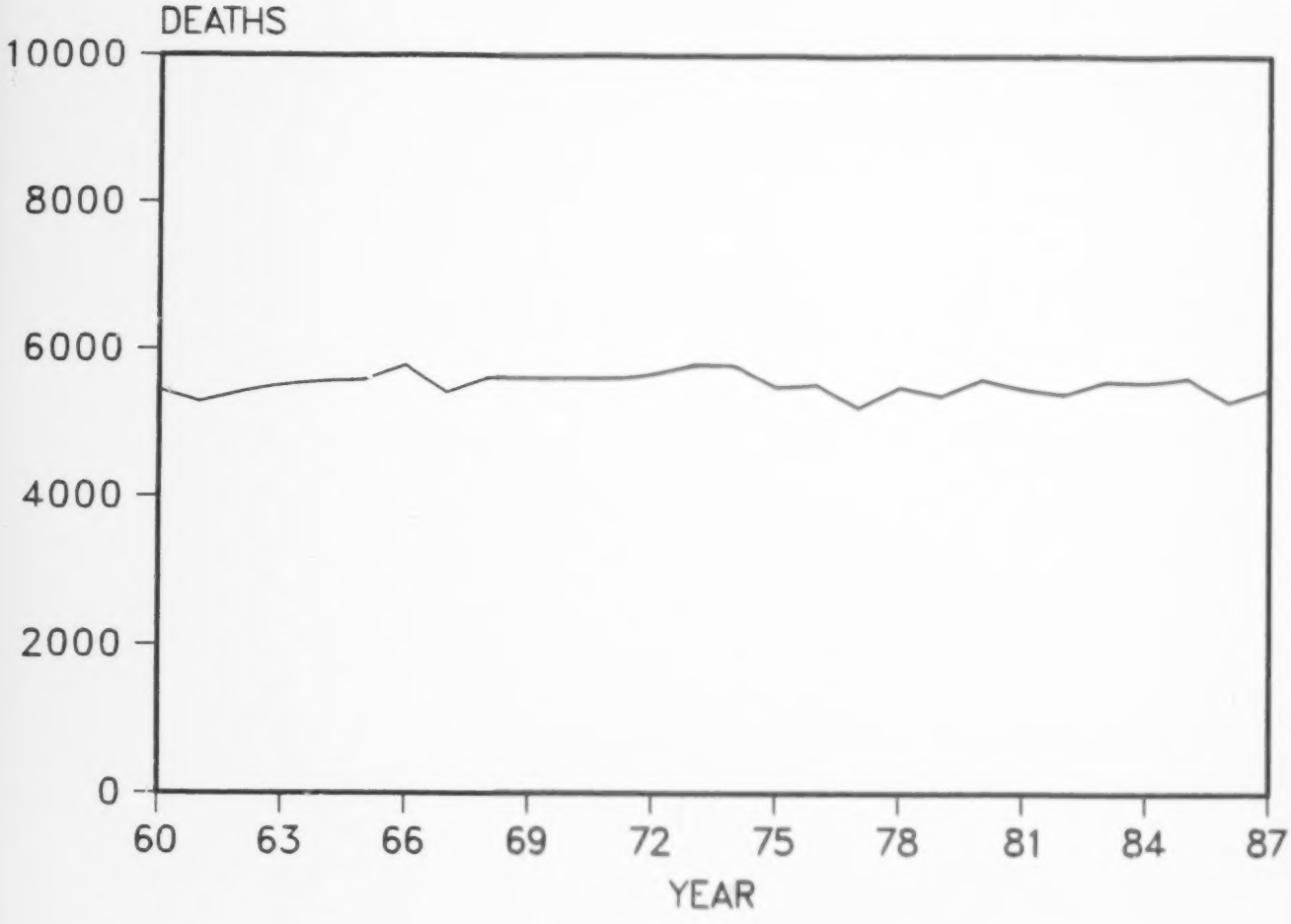


Table 2.1
Resident Deaths and Crude Death Rates
North Dakota and United States
1960-1987

Year	United States		North Dakota	
	Number	Crude Death Rate	Number	Crude Death Rate
1960	1,711,982	9.5	5,449	8.6
1961	1,701,522	9.3	5,274	8.2
1962	1,756,720	9.5	5,424	8.5
1963	1,813,549	9.6	5,516	8.5
1964	1,798,051	9.4	5,570	8.6
1965	1,828,136	9.4	5,579	8.6
1966	1,863,149	9.5	5,783	8.9
1967	1,851,323	9.4	5,401	8.6
1968	1,930,082	9.7	5,611	9.0
1969	1,921,990	9.5	5,595	9.1
1970	1,921,031	9.4	5,606	9.1
1971	1,927,543	9.3	5,591	8.9
1972	1,963,944	9.4	5,651	9.0
1973	1,973,003	9.3	5,789	9.1
1974	1,934,388	9.0	5,772	9.1
1975	1,892,879	8.8	5,482	8.6
1976	1,909,440	8.8	5,523	8.5
1977	1,899,597	8.6	5,198	8.0
1978	1,927,788	8.7	5,484	8.4
1979	1,913,841	8.5	5,360	8.2
1980	1,989,841	8.7	5,596	8.6
1981	1,977,981	8.6	5,456	8.3
1982	1,974,797	8.5	5,385	8.0
1983	2,019,201	8.6	5,569	8.2
1984	2,039,369	8.7	5,538	8.1
1985	2,086,440	8.7	5,618	8.2
1986	2,095,490(1)	8.7	5,285	7.8
1987	2,125,080(1)	8.7	5,476	8.1

(1) U.S. Estimate

Figure 2.2
Resident Death Rates
North Dakota and United States
1960-1987

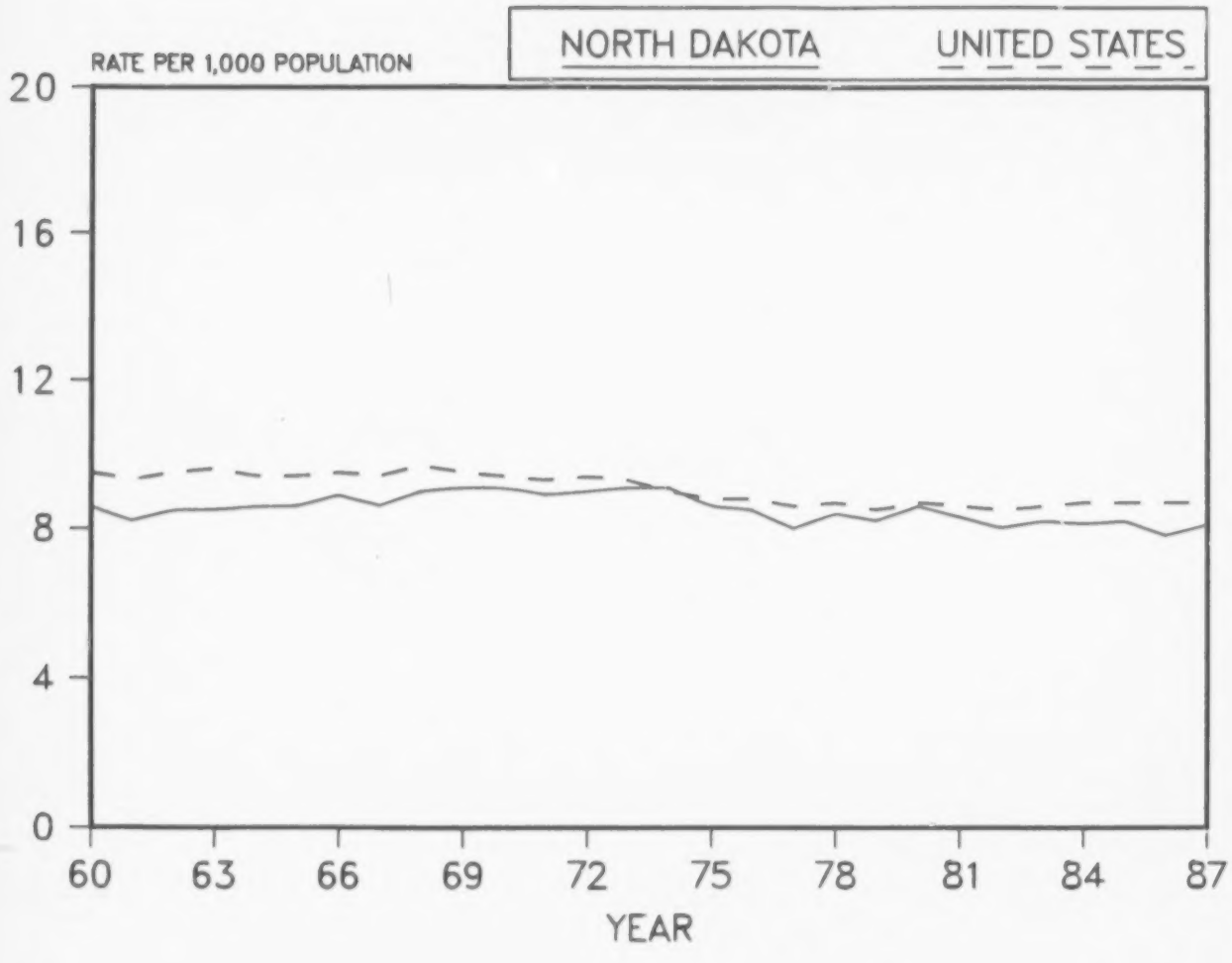


Table 2.2
Resident Deaths by Age, Race, and Sex
North Dakota, 1987

Age	Total			White			Native American			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Under 1 Year	90	53	37	75	43	32	15	10	5	--	--	--
1-4 Years	24	10	14	16	4	12	8	6	2	--	--	--
5-9 Years	17	11	6	16	10	6	1	1	--	--	--	--
10-14 Years	19	14	5	17	12	5	2	2	--	--	--	--
15-19 Years	42	29	13	38	26	12	4	3	1	--	--	--
20-24 Years	45	37	8	37	31	6	8	6	2	--	--	--
25-29 Years	49	32	17	39	25	14	10	7	3	--	--	--
30-34 Years	54	35	19	52	33	19	2	2	--	--	--	--
35-39 Years	41	30	11	37	27	10	4	3	1	--	--	--
40-44 Years	65	46	19	64	45	19	1	1	--	--	--	--
45-49 Years	82	57	25	72	51	21	10	6	4	--	--	--
50-54 Years	136	99	37	124	90	34	12	9	3	--	--	--
55-59 Years	232	145	87	220	139	81	12	6	6	--	--	--
60-64 Years	354	242	112	332	228	104	22	14	8	--	--	--
65-69 Years	442	292	150	435	288	147	7	4	3	--	--	--
70-74 Years	662	438	224	644	429	215	18	9	9	--	--	--
75-79 Years	771	448	323	758	440	318	12	7	5	1	1	--
80-84 Years	872	467	405	860	463	397	12	4	8	--	--	--
85-89 Years	758	336	422	752	333	419	6	3	3	--	--	--
90 and Over	721	214	507	717	214	503	4	--	4	--	--	--
Total	5,476	3,035	2,441	5,305	2,931	2,374	170	103	67	1	1	0

Leading Causes of Death

In 1987, 85.1 percent of all North Dakota resident deaths were attributable to the ten leading causes of death. These principal causes of death, within the state, have remained much the same in recent years. The number of deaths and death rates for the ten leading causes are shown in Table 2.3. The proportion of the total deaths resulting from five of the ten principal causes is illustrated in Figure 2.3. In addition, median ages at death by leading cause of death are presented in Figure 2.4.

Table 2.3
Leading Causes of Resident
Death and Cause-Specific Rates(1)
North Dakota and United States
1987

United States				North Dakota			
Cause	Rank	Deaths	Death Rate	Cause	Rank	Deaths	Death Rate
Diseases of the Heart	1	759,350	312.2	Diseases of the Heart	1	1,948	289.9
Malignant Neoplasms	2	476,730	196.0	Malignant Neoplasms	2	1,267	188.6
Cerebrovascular Disease	3	148,730	61.1	Cerebrovascular Disease	3	469	69.8
Accidents	4	92,500	38.0	Accidents	4	237	35.3
Chronic Obstructive Pulmonary Diseases and Allied Conditions	5	78,010	32.1	Chronic Obstructive Pulmonary Diseases and Allied Conditions	5	191	28.4
Influenza and Pneumonia	6	68,630	28.2	Influenza and Pneumonia	6	166	24.7
Diabetes	7	37,770	15.5	Diabetes	7	128	19.0
Suicide	8	29,590	12.2	Atherosclerosis	8	90	13.4
Cirrhosis of the Liver	9	25,960	10.7	Suicide	9	87	12.9
Nephritis and Nephrosis	10	23,600	9.7	Other Diseases of the Arteries	10	77	11.5
Subtotal		1,740,870	715.7	Subtotal		4,660	693.5
All Other Causes		384,210	157.9	All Other Causes		816	121.4
Total		2,125,080	873.6	Total		5,476	814.9

(1) Per 100,000 Resident Population

Figure 2.3
Leading Causes of Resident Death
North Dakota and United States
1987

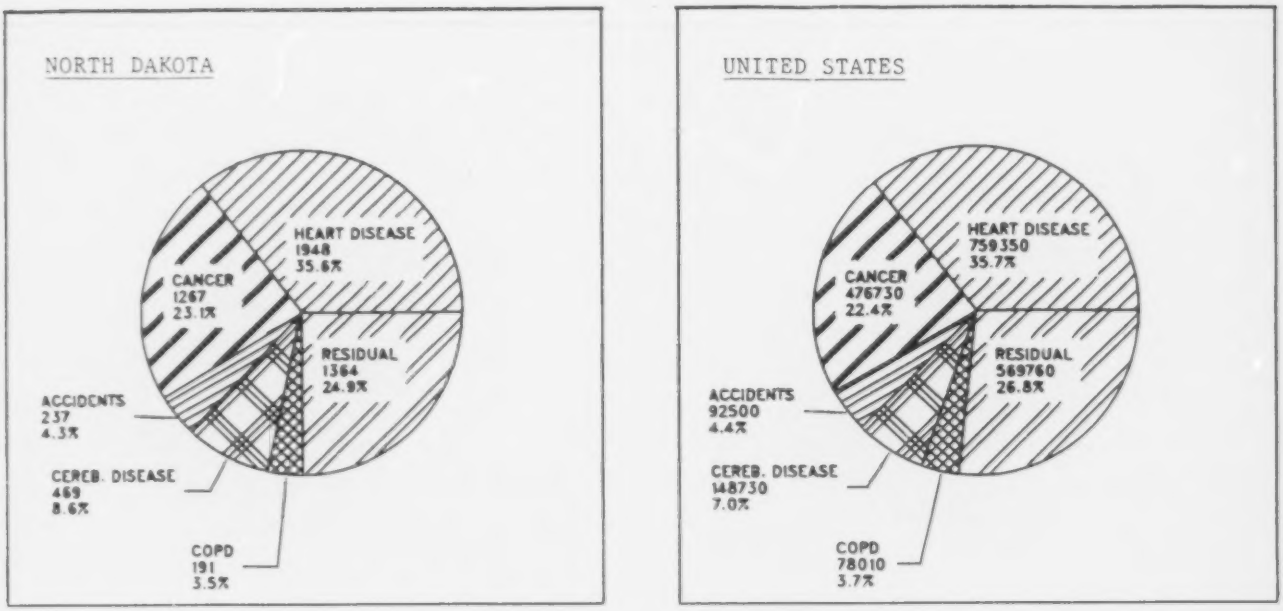
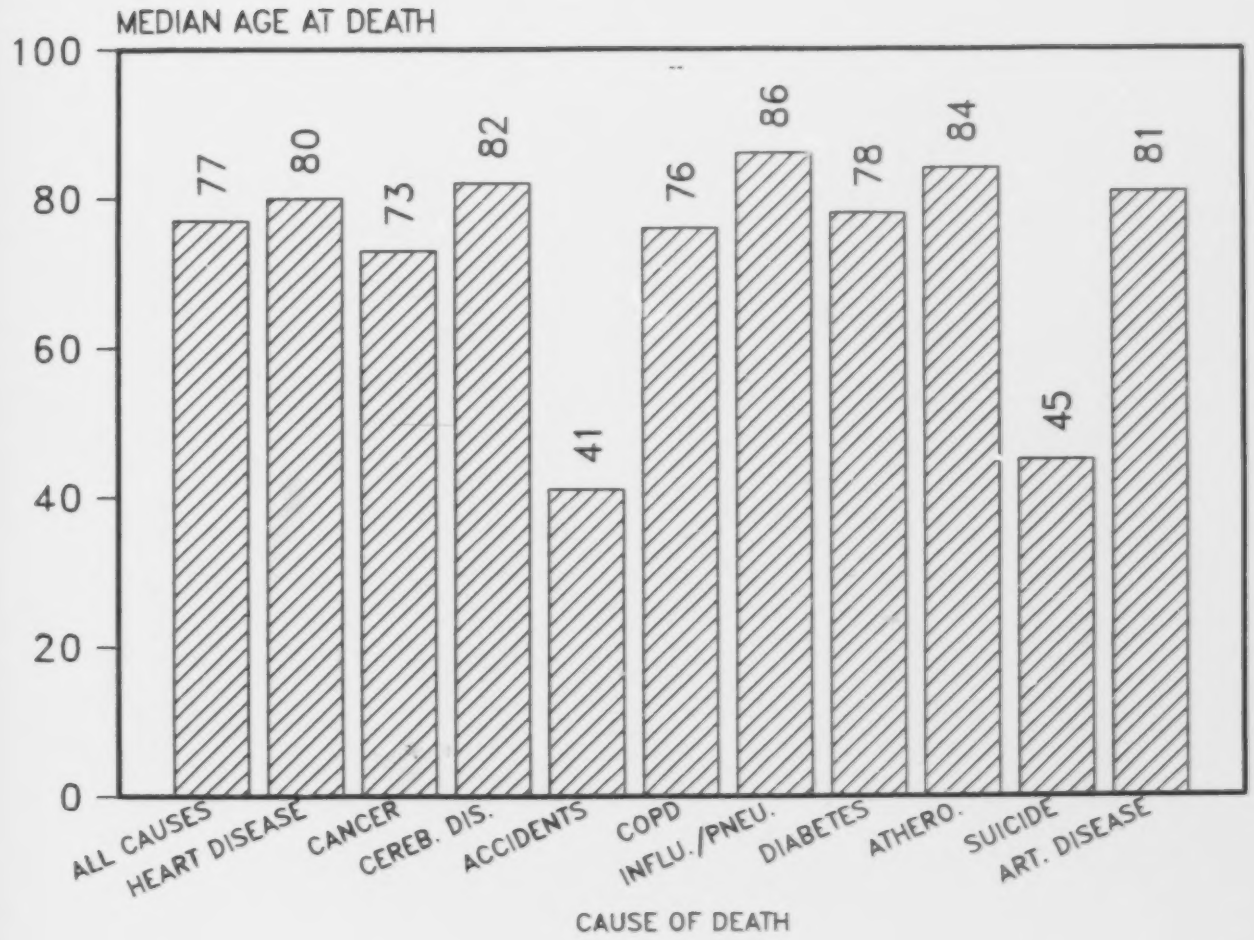


Figure 2.4
Leading Causes of Resident Death
by Median Age at Death
North Dakota, 1987



As mentioned previously, the most frequent causes of death among all North Dakota residents has changed little in recent years. This, however, does not imply similarity in the leading causes of death among residents at different ages or of different gender. Figure 2.5 and Table 2.4 contains the most frequent causes of death by age.

Examination of Figure 2.5 and Table 2.4 discloses that major differences in the leading causes of death were associated with age. Diseases of the heart and malignant neoplasms had the most widespread significance of any conditions, as they were present in 7 of the 8 age cohorts. In addition, accidents were present in 6 of the 8 cohorts. The variation in leading causes of death by age was most evident among deaths to infants under one year of age. External causes of death, including accidents and suicides, were predominant among persons ages 1 through 34. At ages 35 years and older, chronic conditions were responsible for the largest proportion of deaths.

Figure 2.5
Leading Causes of Resident Death by Age
North Dakota, 1987

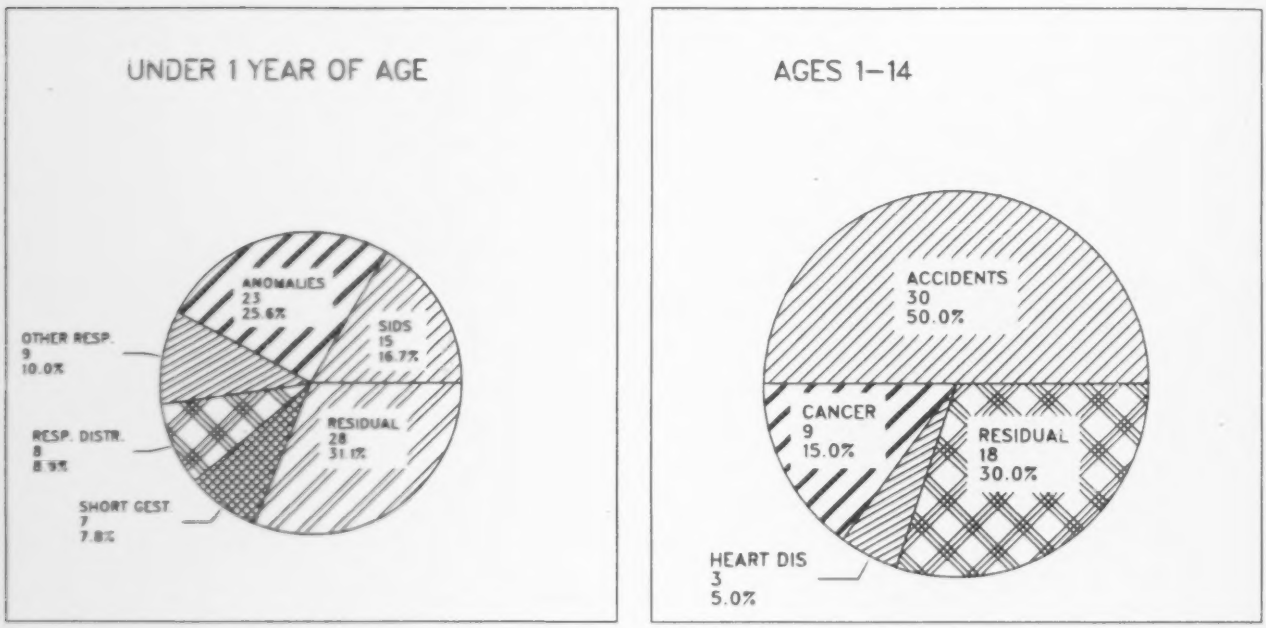
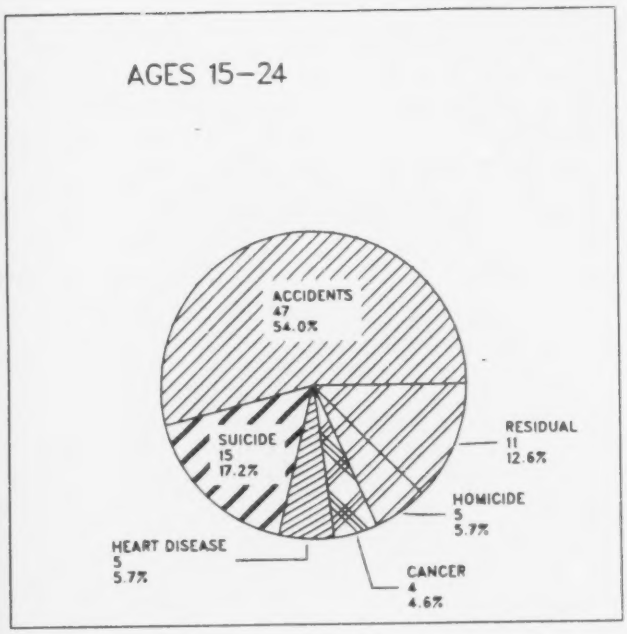
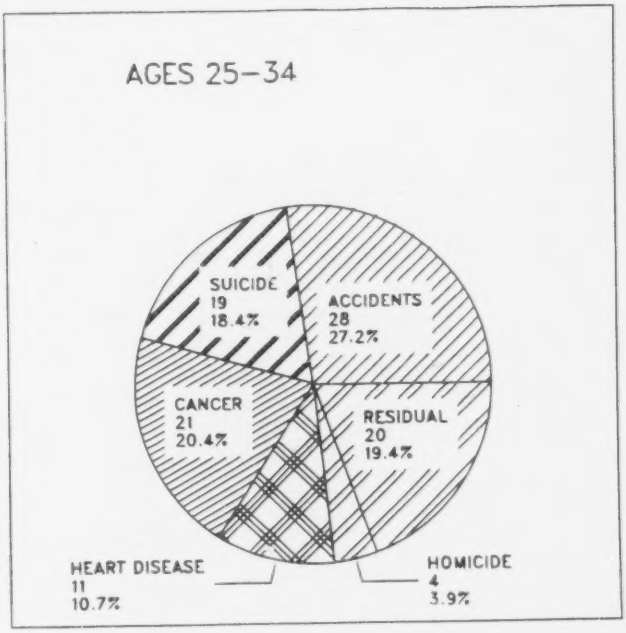
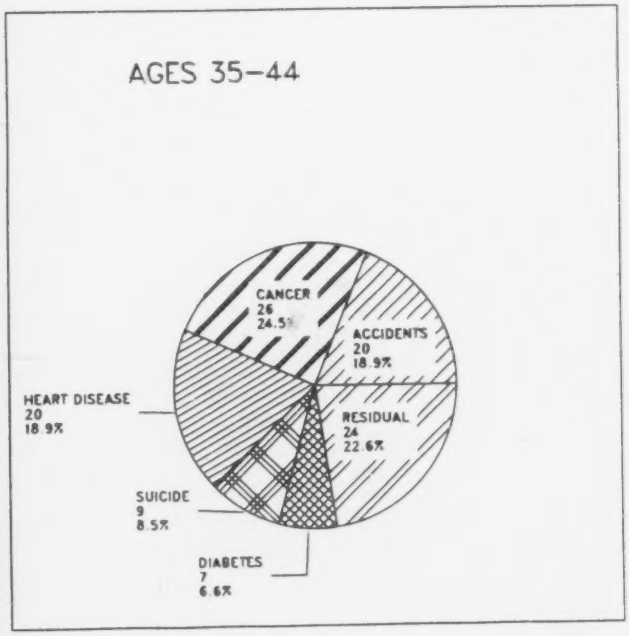


Figure 2.5 (Continued)
Leading Causes of Resident Death by Age
North Dakota, 1987







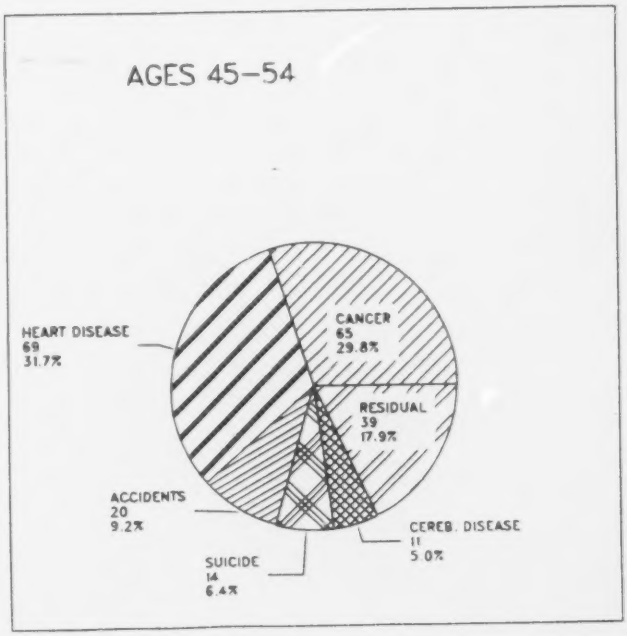


Figure 2.5 (Continued)
Leading Causes of Resident Death by Age
North Dakota, 1987

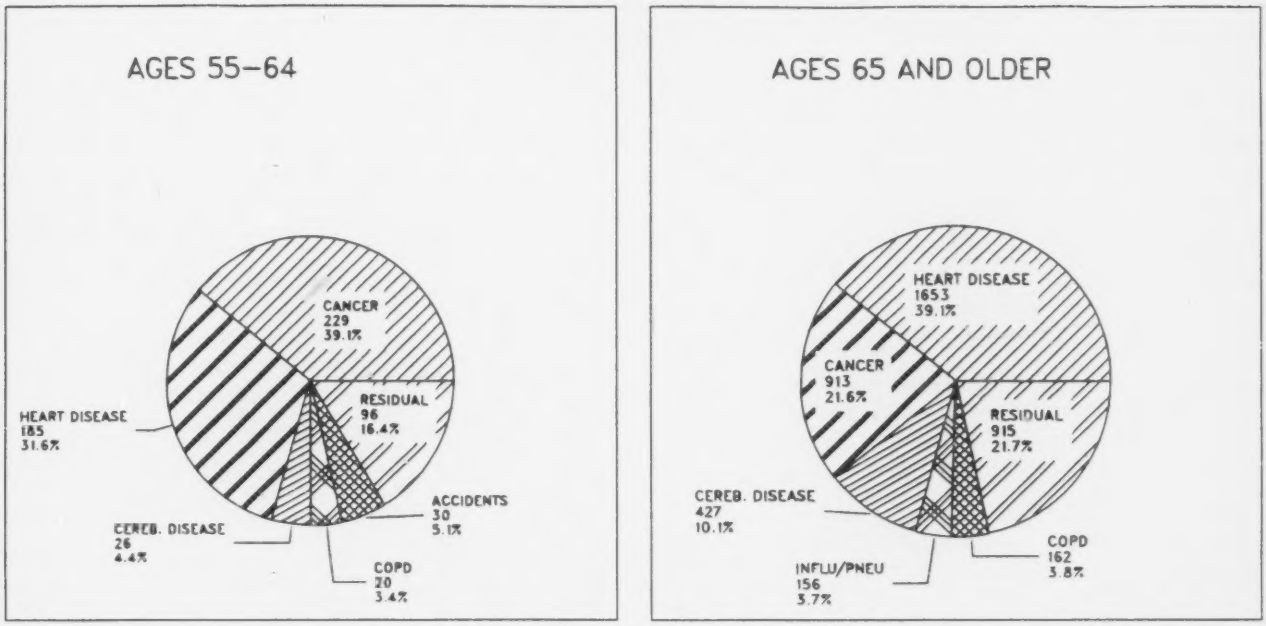


Table 2.4
Leading Causes of Resident Death by Age
North Dakota, 1987

Rank	All Ages	Under 1 Year	1-14	15-24	25-34	35-44	45-54	55-64	65 and Older
1	Diseases of the Heart 1,948	Congenital Anomalies 23	Accidents 30	Accidents 47	Accidents 28	Malignant Neoplasms 26	Diseases of the Heart 69	Malignant Neoplasms 229	Diseases of the Heart 1,653
2	Malignant Neoplasms 1,267	SIDS 15	Malignant Neoplasms 9	Suicide 15	Malignant Neoplasms 21	Accidents 20	Malignant Neoplasms 65	Diseases of the Heart 185	Malignant Neoplasms 913
3	Cerebro-vascular Disease 469	Other Respiratory Conditions 9	Diseases of the Heart 3	Diseases of the Heart 5	Suicide 19	Diseases of the Heart 20	Accidents 20	Accidents 30	Cerebro-vascular Disease 427
4	Accidents 237	Respiratory Distress Syndrome 8	------	Homicide 5	Diseases of the Heart 11	Suicide 9	Suicide 14	Cerebro-vascular Disease 26	COPD 162
5	COPD 191	Short Gestation/Low Birth Weight 7	------	Malignant Neoplasms 4	Homicide 4	Diabetes 7	Cerebro-vascular Disease 11	COPD 20	Influenza and Pneumonia 156
Total Deaths All Causes	5,476	90	60	87	103	106	218	586	4,226

Diseases of the Heart

In 1987, 1,948 North Dakota residents died from diseases of the heart. Heart disease continued to be the single leading cause of death in North Dakota and in the United States, accounting for more deaths than the next two leading causes combined; namely malignant neoplasms and cerebrovascular disease deaths.

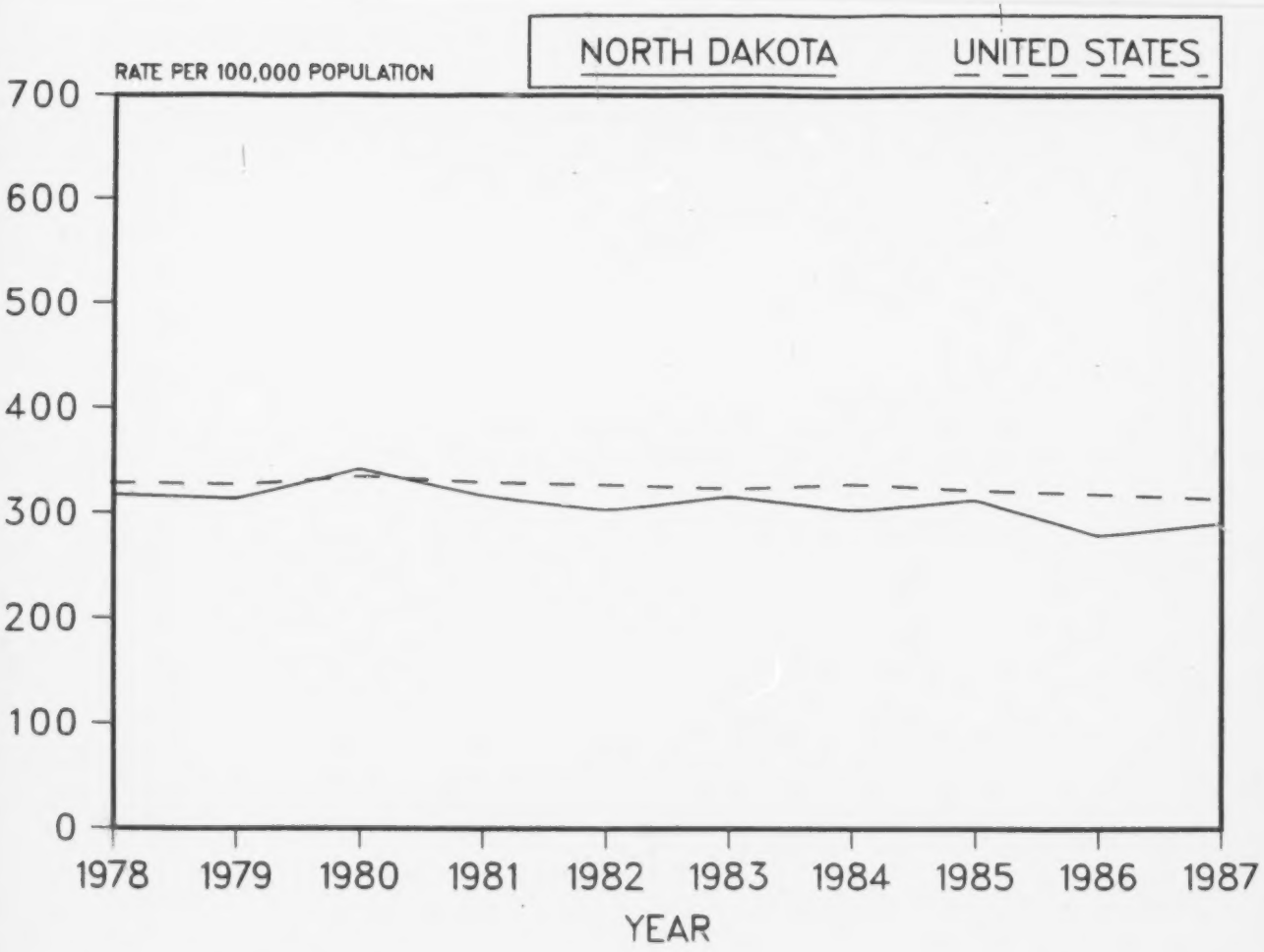
Examination of Table 2.5 indicates that heart disease deaths were more prevalent in the older age groups and that male heart disease deaths were more frequent than female deaths. Nearly 65 percent of the state's resident heart disease deaths were to individuals 75 years of age and older. In addition, male deaths were substantially more frequent in nearly all age groups.

During the 1978-1987 time period, diseases of the heart death rates fluctuated somewhat, with a slight decline noted, both nationwide and within North Dakota. The 1987 state death rate was slightly lower than the corresponding United States rate (Figure 2.6).

Table 2.5
Resident Deaths Due to Diseases of the Heart
by Age, Race, and Sex
North Dakota, 1987

Age	All Races			White		Native American	
	Total	Male	Female	Male	Female	Male	Female
Under 1 Year	2	2	--	1	--	1	--
1-4 Years	3	1	2	1	1	--	1
5-14 Years	--	--	--	--	--	--	--
15-24 Years	5	3	2	2	2	1	--
25-34 Years	11	8	3	6	3	2	--
35-44 Years	20	18	2	18	2	--	--
45-54 Years	69	53	16	47	13	6	3
55-64 Years	185	147	38	139	35	8	3
65-74 Years	390	268	122	261	115	7	7
75-84 Years	633	349	284	347	278	2	6
85+ Years	630	217	413	215	409	2	4
Total	1,948	1,066	882	1,037	858	29	24

Figure 2.6
Resident Heart Disease Death Rates
North Dakota and United States
1978-1987



Cancer

Of the 5,476 North Dakota resident deaths, 1,267 persons died from cancer in 1987. Of these cancer deaths, 722 were male, while 545 were female. Cancer deaths in general, and male cancer deaths in particular, were more prevalent in the older age groups (Table 2.6).

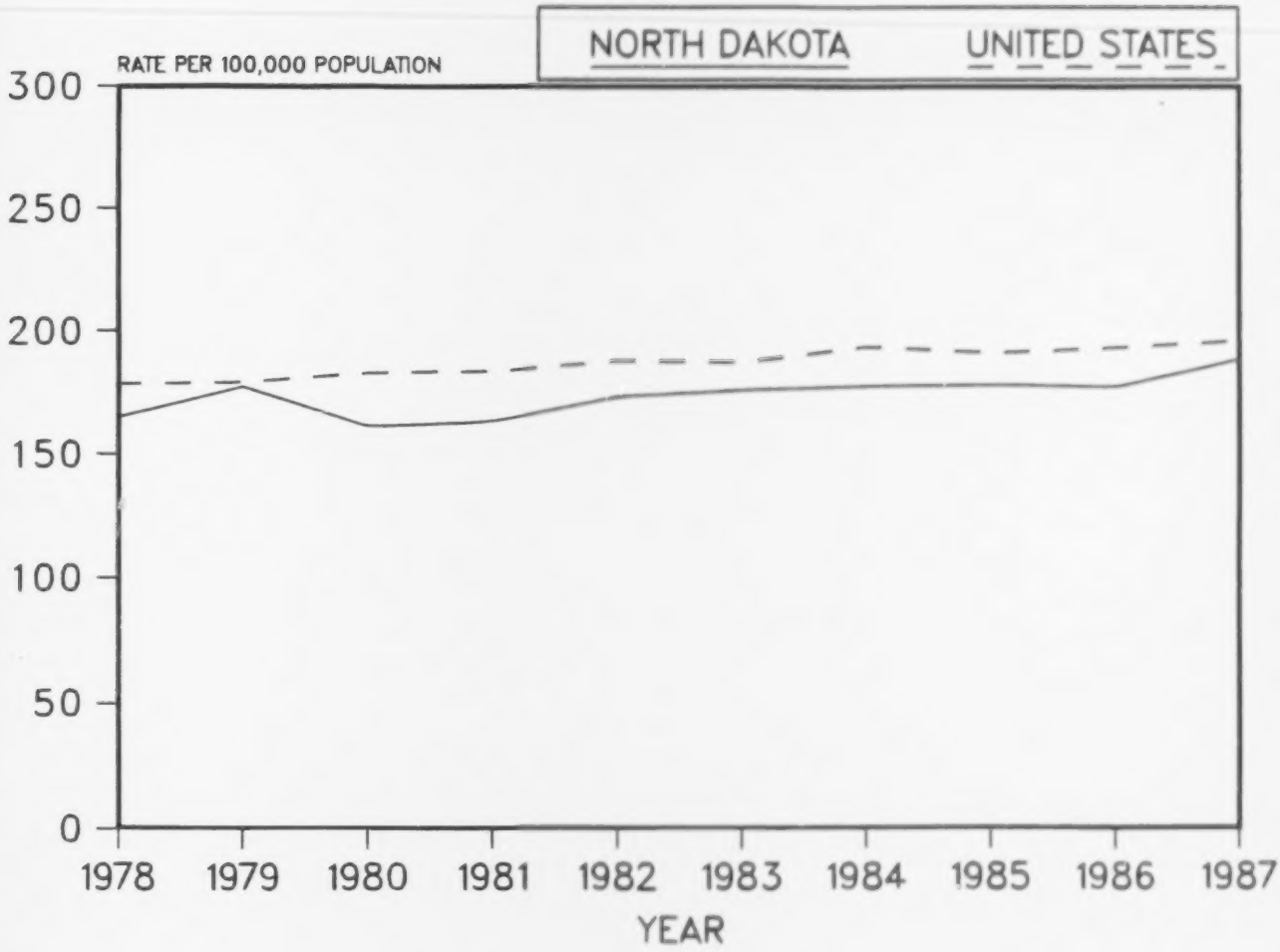
Generally, both national and statewide cancer death rates increased slightly during the 1978-1987 time period. In 1987 the state cancer death rate was slightly lower than the corresponding national rate (Figure 2.7).

Table 2.6
Resident Deaths Due to Malignant Neoplasms by Age, Race, and Sex
North Dakota, 1987

Age	All Races			White		Native American	
	Total	Male	Female	Male	Female	Male	Female
Under 1 Year	--	--	--	--	--	--	--
1-4 Years	1	1	--	1	--	--	--
5-14 Years	8	3	5	3	5	--	--
15-24 Years	4	2	2	2	2	--	--
25-34 Years	21	9	12	9	12	--	--
35-44 Years	26	7	19	6	18	1	1
45-54 Years	65	42	23	40	23	2	--
55-64 Years	229	137	92	135	89	2	3
65-74 Years	365	228	137	227	136	1	1
75-84 Years	373	211	162	208	161	3(1)	1
85+ Years	175	82	93	82	93	--	--
Total	1,267	722	545	713	539	9	6

(1) Includes One "Other" Race Male

Figure 2.7
Resident Malignant Neoplasm Death Rates
North Dakota and United States
1978-1987



Cerebrovascular Disease

Deaths due to cerebrovascular disease (CVD) numbered 469 among North Dakota residents in 1987. Of the total deaths, 206 were male and 263 were female.

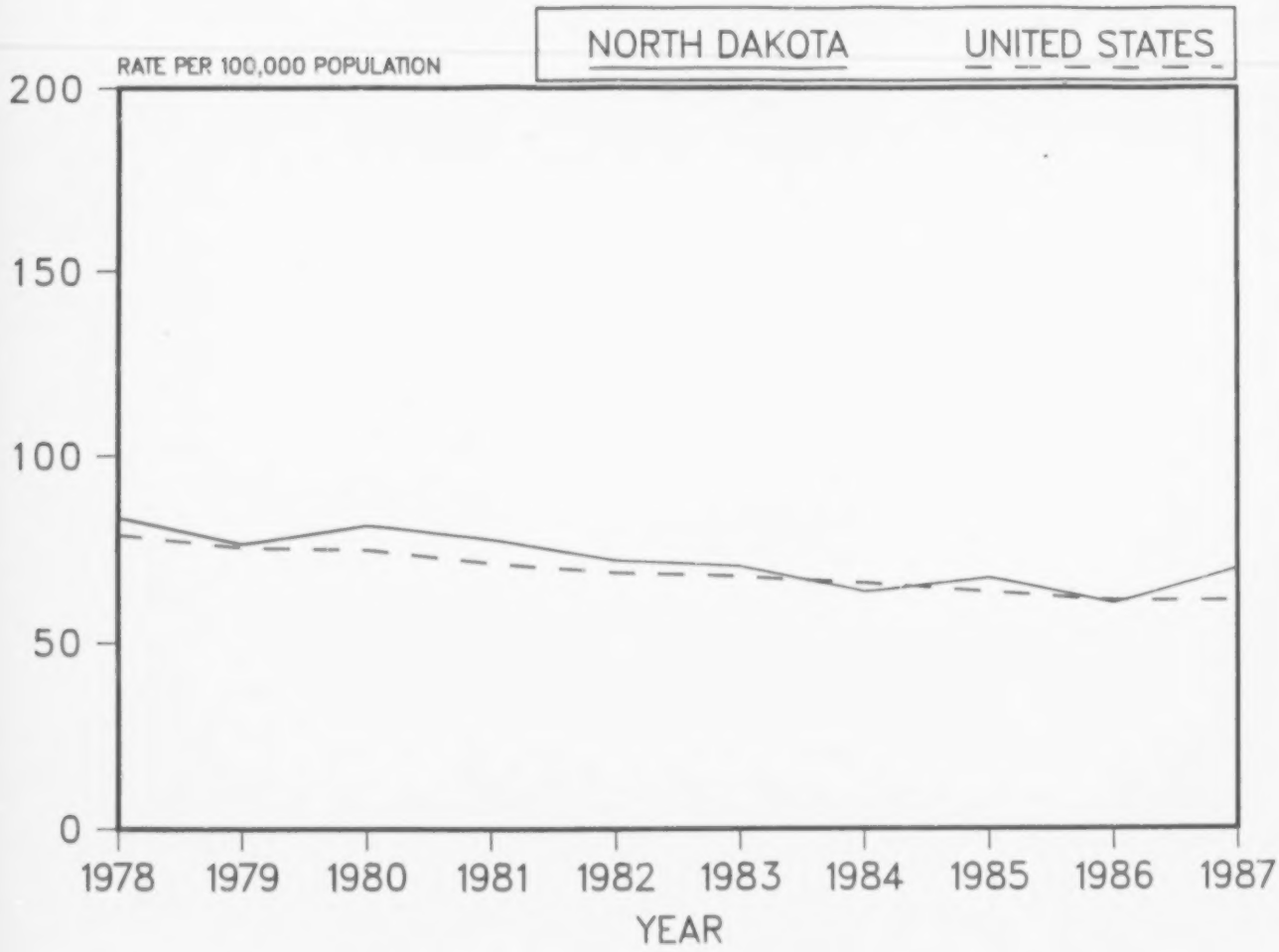
CVD deaths were substantially more prevalent in the older age groups. Approximately 74 percent of North Dakota's CVD deaths were to individuals ages 75 years and older (Table 2.7).

The historic pattern (1978-1987) of cerebrovascular disease death rates for North Dakota and the United States has been one of general decline. In 1987 the state CVD death rate was slightly higher than the corresponding national rate (Figure 2.8).

Table 2.7
Resident Deaths Due to
Cerebrovascular Disease by Age, Race, and Sex
North Dakota, 1987

Age	All Races			White		Native American	
	Total	Male	Female	Male	Female	Male	Female
Under 1 Year	--	--	--	--	--	--	--
1-4 Years	--	--	--	--	--	--	--
5-14 Years	--	--	--	--	--	--	--
15-24 Years	1	--	1	--	1	--	--
25-34 Years	2	--	2	--	2	--	--
35-44 Years	2	2	--	2	--	--	--
45-54 Years	11	6	5	5	4	1	1
55-64 Years	26	16	10	14	10	2	--
65-74 Years	80	48	32	46	32	2	--
75-84 Years	152	72	80	70	77	2	3
85+ Years	195	62	133	62	133	--	--
Total	469	206	263	199	259	7	4

Figure 2.8
Resident Cerebrovascular Disease Death Rates
North Dakota and United States
1978-1987



Accidents

Approximately 4 percent of all North Dakota resident deaths were the results of accidents. Of the total 237 accidental deaths, 182 were male while 55 were female.

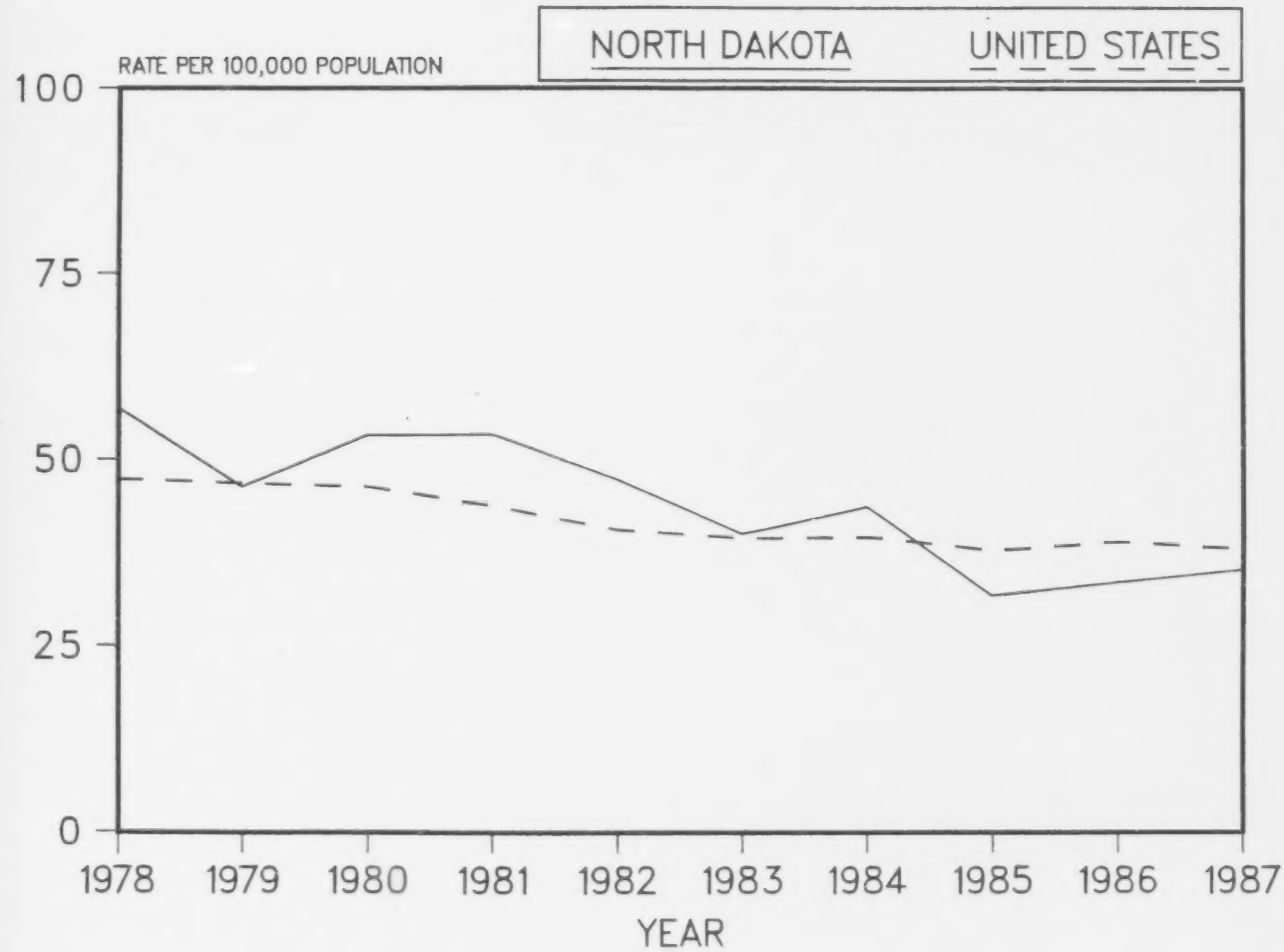
Accidental deaths among males were most frequent in the 15-24 age group. This age group accounted for nearly 20 percent of all male accidental deaths.

Generally, national and state accidental death rates fluctuated substantially during the 1978-1987 time period. State accidental death rates were slightly higher than corresponding national rates in a majority of the reporting periods (Figure 2.9).

Table 2.8
Resident Deaths Due to Accidents
by Age, Race, and Sex
North Dakota, 1987

Age	All Races			White		Native American	
	Total	Male	Female	Male	Female	Male	Female
Under 1 Year	2	1	1	1	1	--	--
1-4 Years	10	4	6	1	6	3	--
5-14 Years	20	18	2	15	2	3	--
15-24 Years	47	40	7	34	5	6	2
25-34 Years	28	23	5	20	5	3	--
35-44 Years	20	19	1	18	1	1	--
45-54 Years	20	17	3	16	3	1	--
55-64 Years	30	22	8	20	7	2	1
65-74 Years	20	18	2	18	2	--	--
75-84 Years	22	12	10	12	10	--	--
85+ Years	18	8	10	8	10	--	--
Total	237	182	55	163	52	19	3

Figure 2.9
Resident Accident Death Rates
North Dakota and United States
1978-1987



Chronic Obstructive Pulmonary Disease

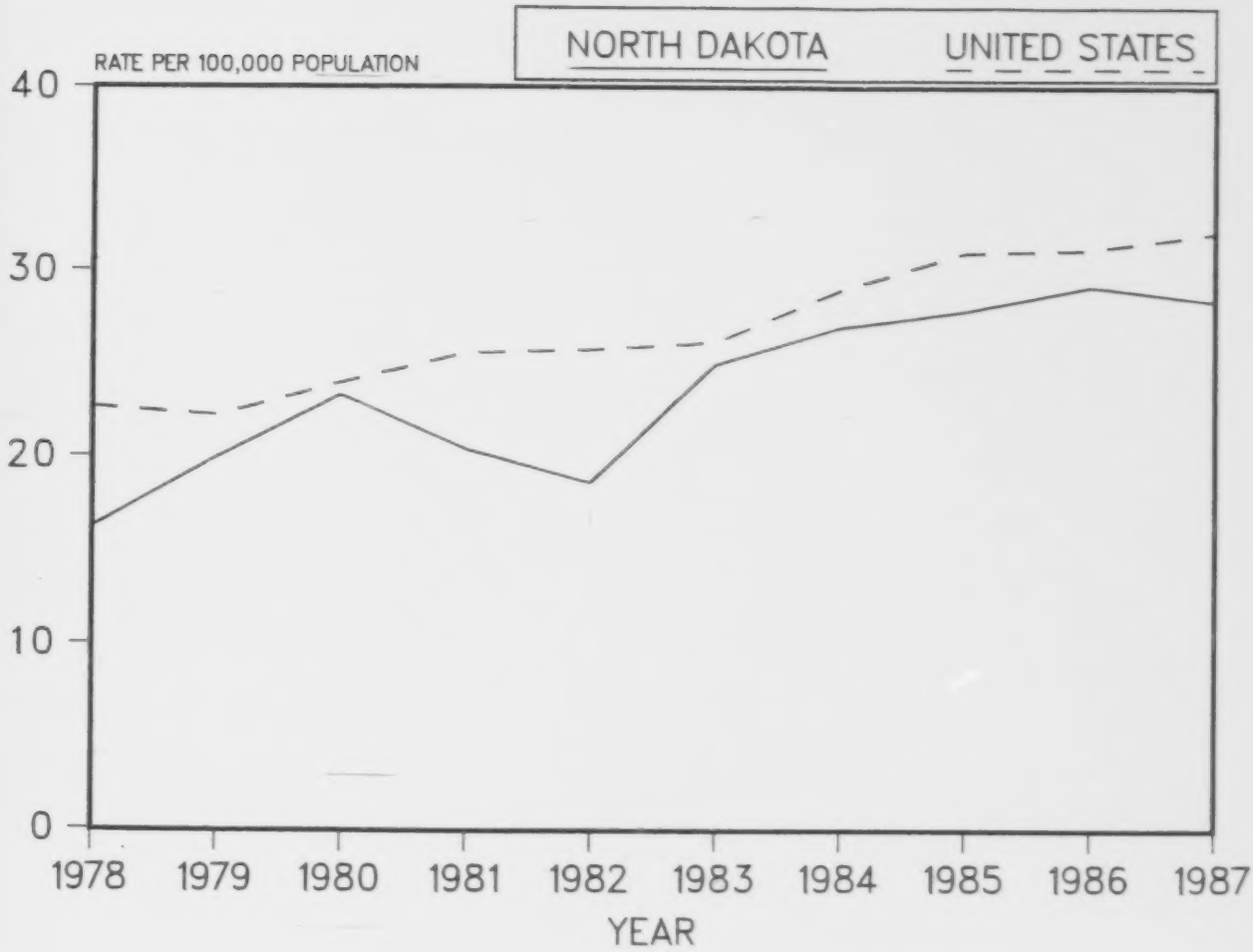
In 1987, 191 North Dakota residents died from chronic obstructive pulmonary disease (COPD). More than three-fourths of all COPD deaths were male. Substantial death differentials, regarding gender, were noted in nearly all age groupings.

During the 1978-1987 time period COPD death rates, both nationally and statewide, increased sharply. Generally, North Dakota rates have been lower than corresponding national COPD death rates (Figure 2.10).

Table 2.9
Resident Deaths Due to Chronic Obstructive Pulmonary Diseases
and Allied Conditions by Age, Race, and Sex
North Dakota, 1987

Age	All Races			White		Native American	
	Total	Male	Female	Male	Female	Male	Female
Under 1 Year	1	1	--	1	--	--	--
1-4 Years	--	--	--	--	--	--	--
5-14 Years	1	--	1	--	1	--	--
15-24 Years	--	--	--	--	--	--	--
25-34 Years	--	--	--	--	--	--	--
35-44 Years	--	--	--	--	--	--	--
45-54 Years	7	5	2	4	2	1	--
55-64 Years	20	13	7	11	6	2	1
65-74 Years	56	43	13	43	12	--	1
75-84 Years	83	70	13	68	12	2	1
85+ Years	23	19	4	18	4	1	--
Total	191	151	40	145	37	6	3

Figure 2.10
Resident Chronic Obstructive Pulmonary Disease Death Rates
North Dakota and United States
1978-1987



Influenza and Pneumonia

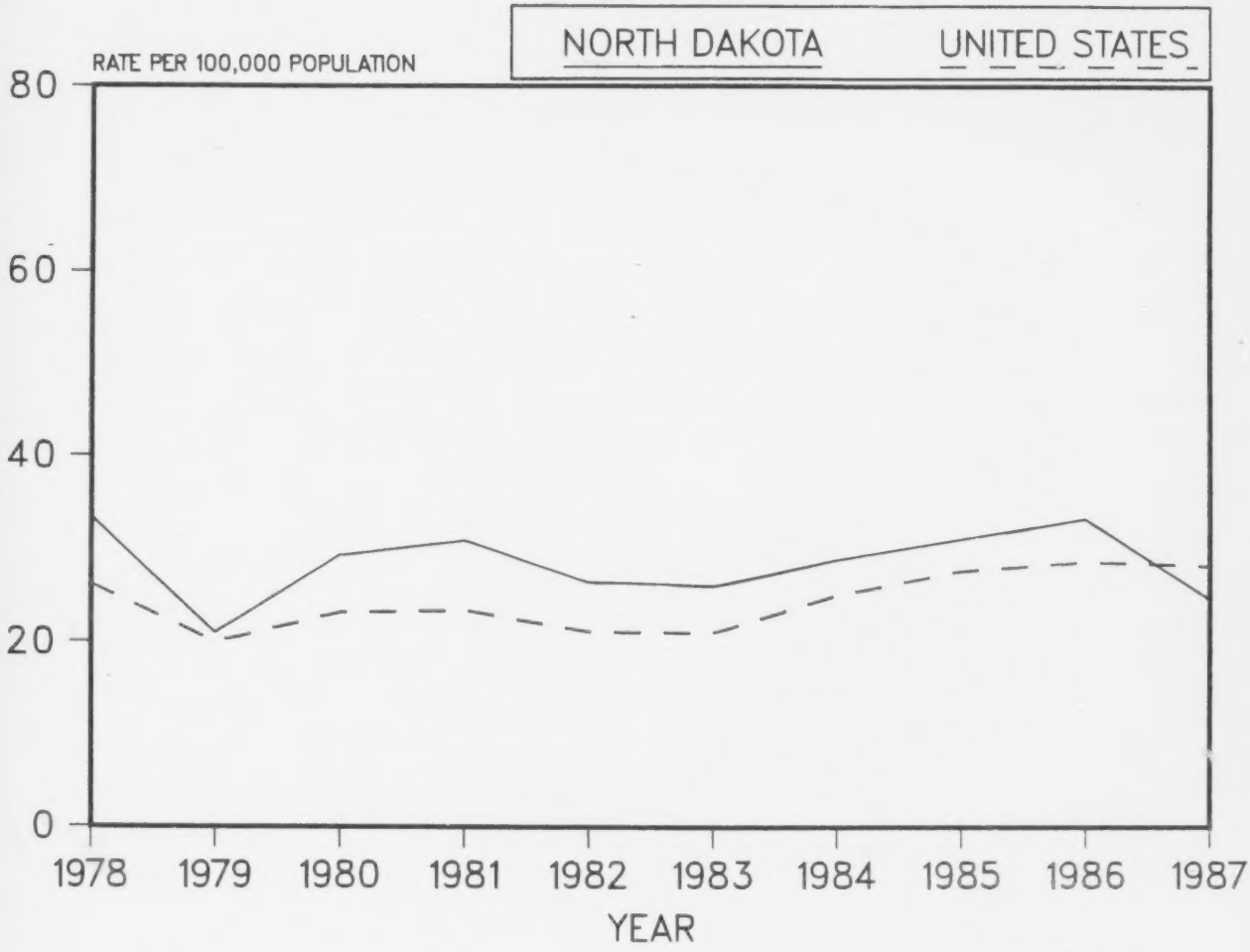
One of every 33 deaths which occurred to North Dakota residents in 1987 was due to influenza and pneumonia. There were a total of 166 deaths of which 80 were male and 86 were female.

Since 1978 national and state influenza and pneumonia death rates have been erratic. Although both state and national rate patterns have been relatively similar, North Dakota has generally experienced higher influenza and pneumonia death rates than reported nationwide. In 1987 North Dakota reported a rate of 24.7, while a rate of 28.2 was recorded nationally (Figure 2.11).

Table 2.10
Resident Deaths Due to Influenza
and Pneumonia by Age, Race, and Sex
North Dakota, 1987

Age	All Races			White		Native American	
	Total	Male	Female	Male	Female	Male	Female
Under 1 Year	1	--	1	--	1	--	--
1-4 Years	--	--	--	--	--	--	--
5-14 Years	--	--	--	--	--	--	--
15-24 Years	1	1	--	1	--	--	--
25-34 Years	--	--	--	--	--	--	--
35-44 Years	1	1	--	1	--	--	--
45-54 Years	2	2	--	2	--	--	--
55-64 Years	5	--	5	--	5	--	--
65-74 Years	15	11	4	11	4	--	--
75-84 Years	50	31	19	30	19	1	--
85+ Years	91	34	57	34	57	--	--
Total	166	80	86	79	86	1	0

Figure 2.11
Resident Influenza and Pneumonia Death Rates
North Dakota and United States
1978-1987



Diabetes

In 1987 diabetes mellitus was the cause of death for 128 North Dakota residents. Female deaths accounted for 75 or 58.6 percent of all diabetes mellitus deaths.

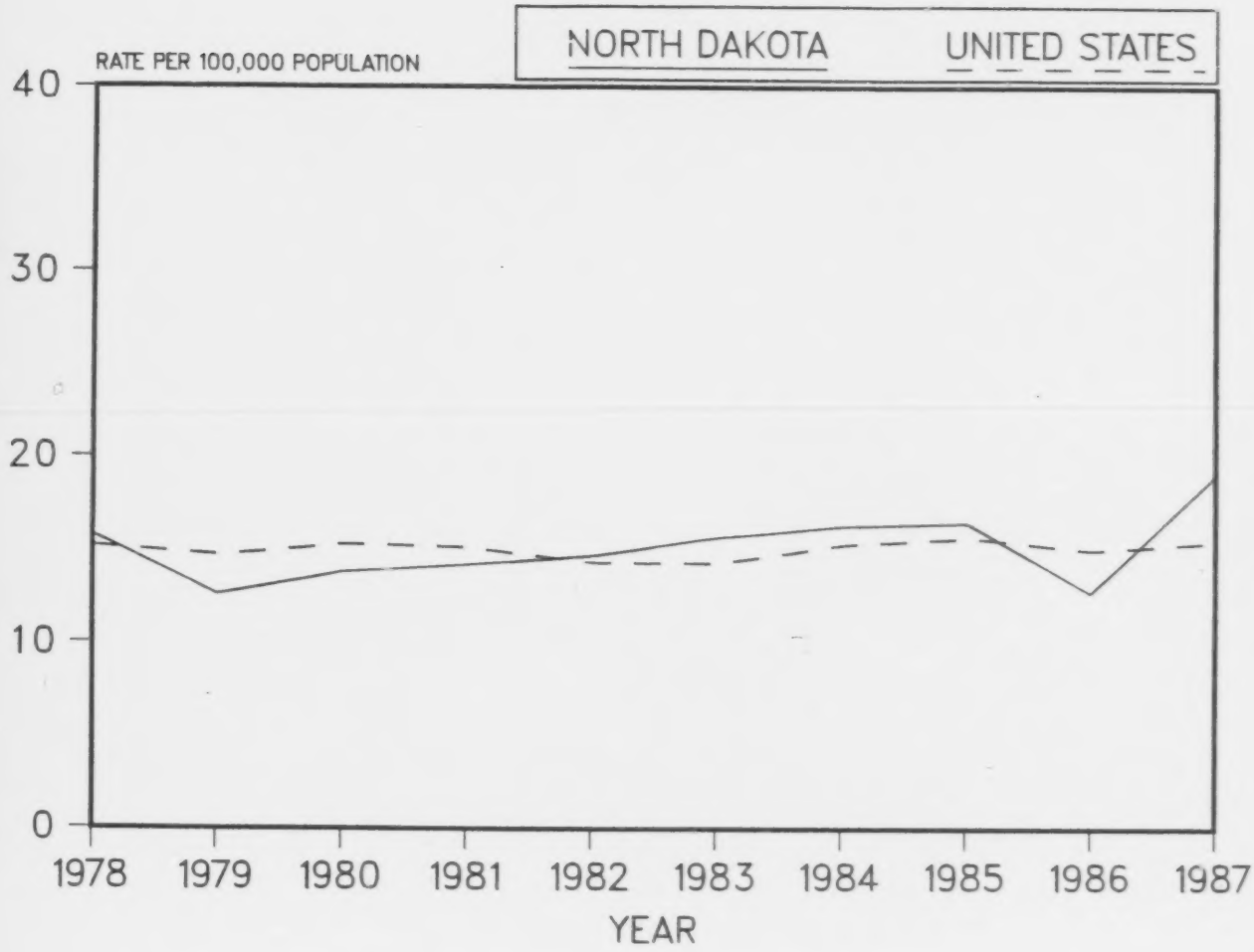
Diabetes deaths were more prevalent in the older age groups, with more than 85 percent of the state's resident diabetes deaths aged 65 and older.

During the 1978-1987 time period the diabetes death rates fluctuated both nationally and within North Dakota. In 1987 North Dakota reported a rate of 19.0, while a rate of 15.5 was experienced nationally (Figure 2.12).

Table 2.11
Resident Deaths Due to Diabetes
by Age, Race, and Sex
North Dakota, 1987

Age	All Races			White		Native American	
	Total	Male	Female	Male	Female	Male	Female
Under 1 Year	--	--	--	--	--	--	--
1-4 Years	--	--	--	--	--	--	--
5-14 Years	--	--	--	--	--	--	--
15-24 Years	1	1	--	1	--	--	--
25-34 Years	--	--	--	--	--	--	--
35-44 Years	7	5	2	5	2	--	--
45-54 Years	1	--	1	--	1	--	--
55-64 Years	10	2	8	1	7	1	1
65-74 Years	30	16	14	15	13	1	1
75-84 Years	53	20	33	20	32	--	1
85+ Years	26	9	17	9	17	--	--
Total	128	53	75	51	72	2	3

Figure 2.12
Resident Diabetes Death Rates
North Dakota and United States
1978-1987



Atherosclerosis

A total of 90 North Dakota resident deaths were attributed to atherosclerosis in 1987, of which 41 were male and 49 female.

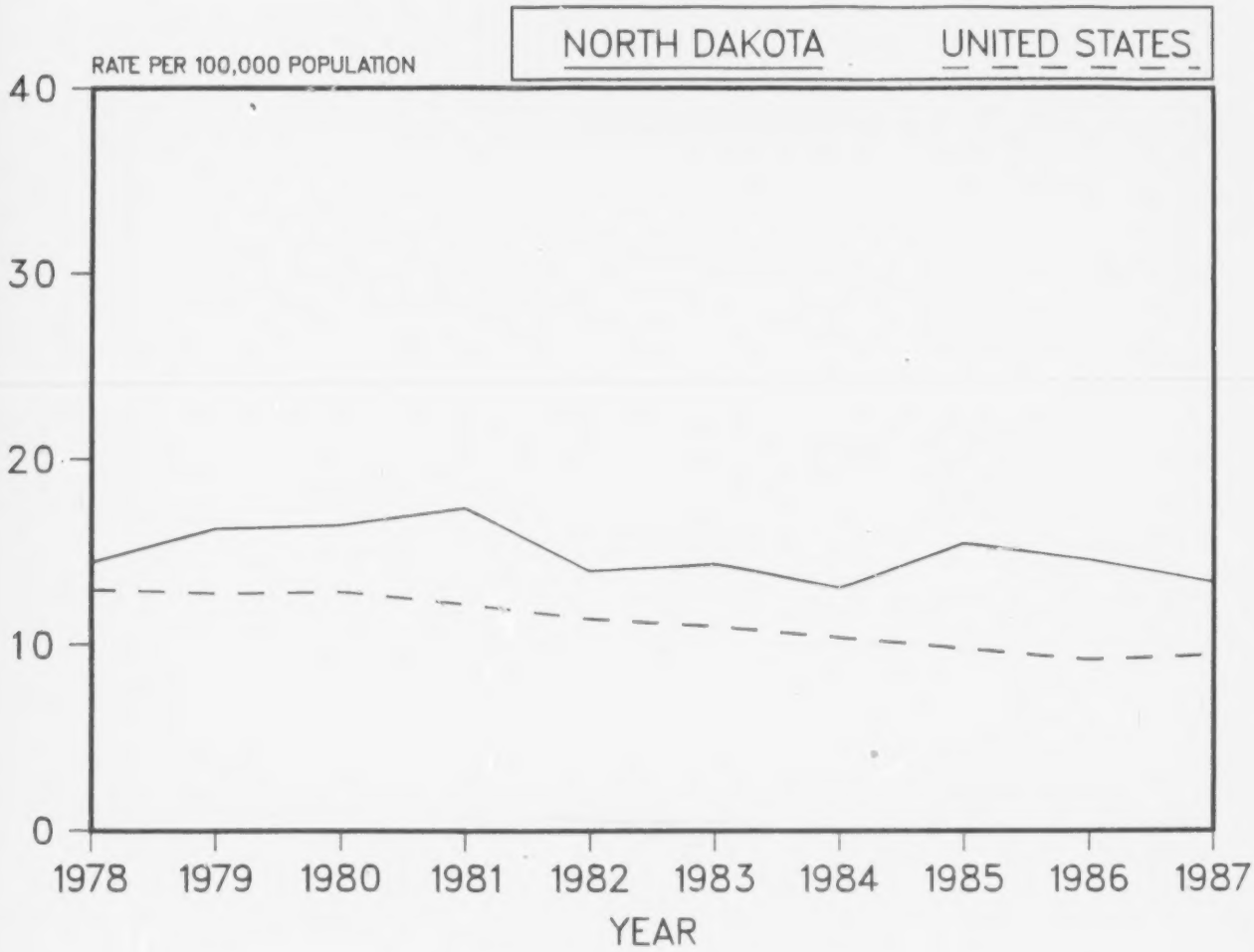
A majority (78.9 percent) of the atherosclerosis deaths occurred at ages 75 and older. A substantial death differential, regarding gender, occurred within the 85 and older age cohort where female deaths were nearly three times that of males (Table 2.12).

Although both state and national atherosclerosis death rates have declined slightly since 1978, generally state rates have been higher than corresponding national atherosclerosis rates (Figure 2.13).

Table 2.12
Resident Deaths Due to Atherosclerosis
by Age, Race, and Sex
North Dakota, 1987

Age	All Races			White		Native American	
	Total	Male	Female	Male	Female	Male	Female
Under 1 Year	--	--	--	--	--	--	--
1-4 Years	--	--	--	--	--	--	--
5-14 Years	--	--	--	--	--	--	--
15-24 Years	--	--	--	--	--	--	--
25-34 Years	--	--	--	--	--	--	--
35-44 Years	--	--	--	--	--	--	--
45-54 Years	1	1	--	1	--	--	--
55-64 Years	3	3	--	3	--	--	--
65-74 Years	15	11	4	11	4	--	--
75-84 Years	28	15	13	13	13	2	--
85+ Years	43	11	32	11	32	--	--
Total	90	41	49	39	49	2	0

Figure 2.13
Resident Atherosclerosis Death Rates
North Dakota and United States
1978-1987



Suicide

There were a total of 87 suicides in 1987, making suicide the ninth leading cause of death for North Dakota residents.

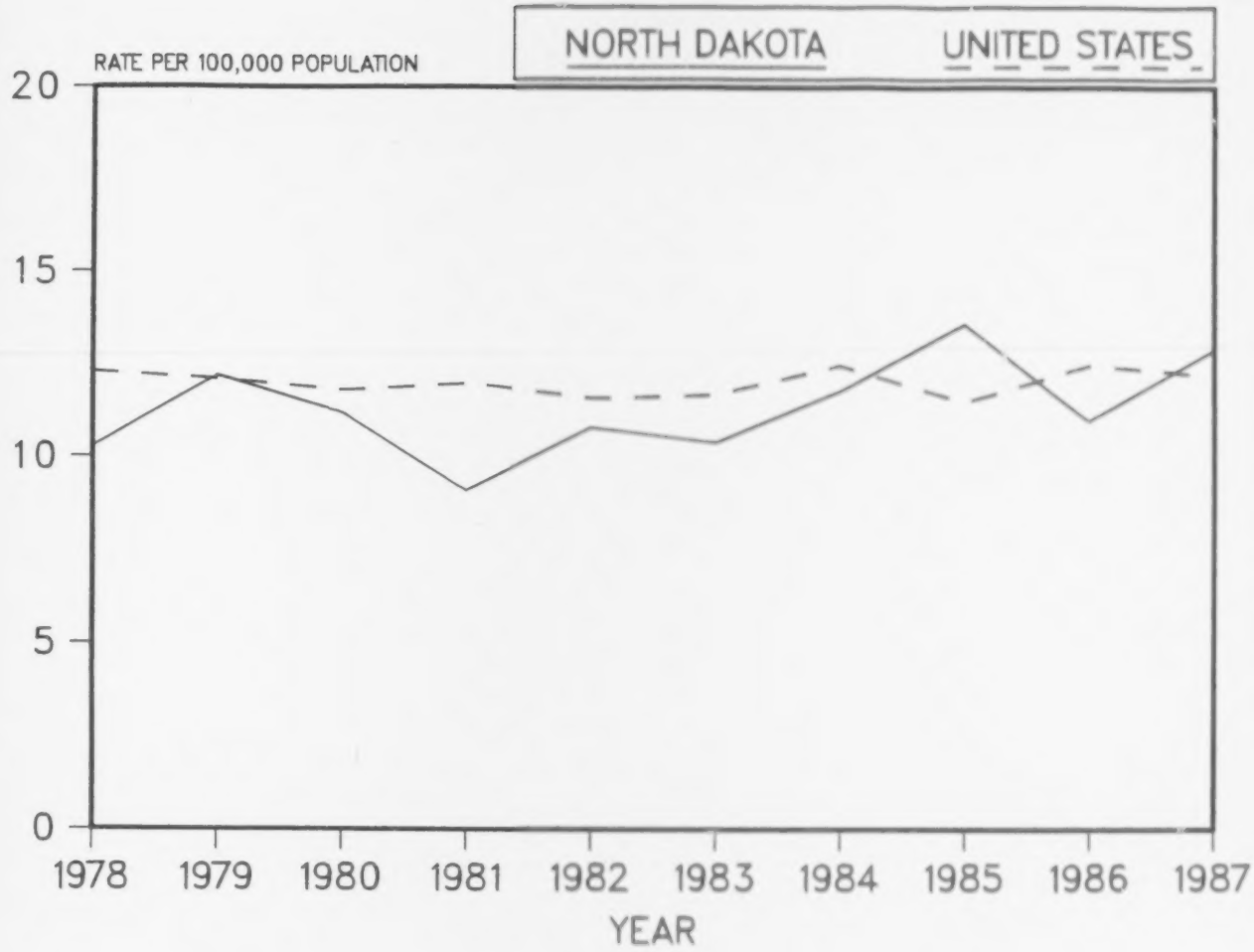
The number of male suicide deaths in 1987 was nearly four and one-half times that of corresponding female deaths. In every age cohort male suicides were substantially larger than corresponding female suicides (Table 2.13).

Generally, both state and national suicide death rates fluctuated considerably during the 1978-1987 time period. Although no clear-cut trend regarding suicide death rates has been formulated, national suicide death rates have generally been higher than corresponding state rates. In 1987, however, the state rate was 12.9 compared with 12.2 reported nationwide (Figure 2.14).

Table 2.13
Resident Deaths Due to Suicide
by Age, Race, and Sex
North Dakota, 1987

Age	All Races			White		Native American	
	Total	Male	Female	Male	Female	Male	Female
Under 1 Year	--	--	--	--	--	--	--
1-4 Years	--	--	--	--	--	--	--
5-14 Years	1	1	--	1	--	--	--
15-24 Years	15	12	3	10	3	2	--
25-34 Years	19	14	5	13	3	1	2
35-44 Years	9	7	2	7	2	--	--
45-54 Years	14	12	2	12	2	--	--
55-64 Years	14	12	2	12	2	--	--
65-74 Years	5	4	1	4	1	--	--
75-84 Years	4	3	1	3	1	--	--
85+ Years	6	6	--	6	--	--	--
Total	87	71	16	68	14	3	2

Figure 2.14
Resident Suicide Death Rates
North Dakota and United States
1978-1987



Other Diseases of the Arteries

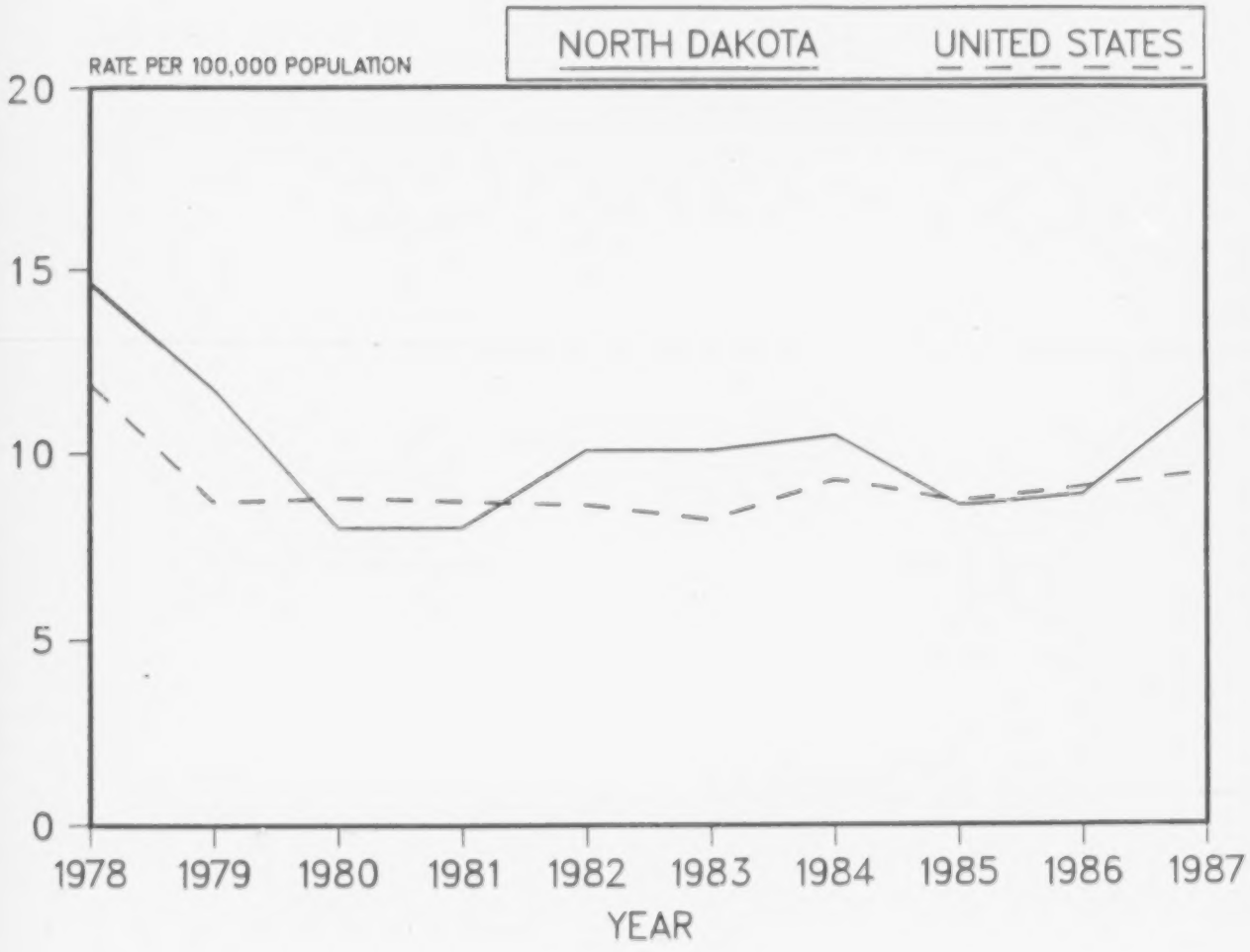
Deaths due to other diseases of the arteries numbered 77 among North Dakota residents. Of these deaths, 39 were male while 38 were female. Examination of Table 2.14 indicates that male deaths from other diseases of the arteries were more prevalent in nearly all age cohorts with the exception of the 85+ age group, where female frequencies were more than twice that of males.

Although state and national death rate trends have been similar, North Dakota's rate has been generally higher than the corresponding national rate (Figure 2.15).

Table 2.14
Resident Deaths Due to Other Diseases of the Arteries
by Age, Race, and Sex
North Dakota, 1987

Age	All Races			White		Native American	
	Total	Male	Female	Male	Female	Male	Female
Under 1 Year	--	--	--	--	--	--	--
1-4 Years	--	--	--	--	--	--	--
5-14 Years	--	--	--	--	--	--	--
15-24 Years	--	--	--	--	--	--	--
25-34 Years	--	--	--	--	--	--	--
35-44 Years	--	--	--	--	--	--	--
45-54 Years	--	--	--	--	--	--	--
55-64 Years	4	3	1	3	1	--	--
65-74 Years	17	13	4	13	4	--	--
75-84 Years	31	15	16	15	16	--	--
85+ Years	25	8	17	8	17	--	--
Total	77	39	38	39	38	0	0

Figure 2.15
Resident Other Diseases of the Arteries Death Rates
North Dakota and United States
1978-1987



Infant Deaths

Of the 5,476 deaths to North Dakota residents in 1987, 90 occurred to individuals less than one year of age (Figure 2.16). Since 1960 the number of infant deaths within the state has declined 78.3 percent. The largest and smallest number of infant deaths were reported in 1960 and 1986 and 1987, respectively. Nationally, the number of infant deaths estimated in 1987 was 38,380, 65.4 percent less than the 110,873 reported in 1960 (Table 2.15).

Since 1960 the rate of death for infants has also dropped considerably. In 1960 there were 24.8 North Dakota resident infant deaths per 1,000 live births, compared with 8.7 infant deaths per 1,000 live births experienced in 1987 (Figure 2.17).

Figure 2.16
Resident Infant Deaths
North Dakota, 1960-1987

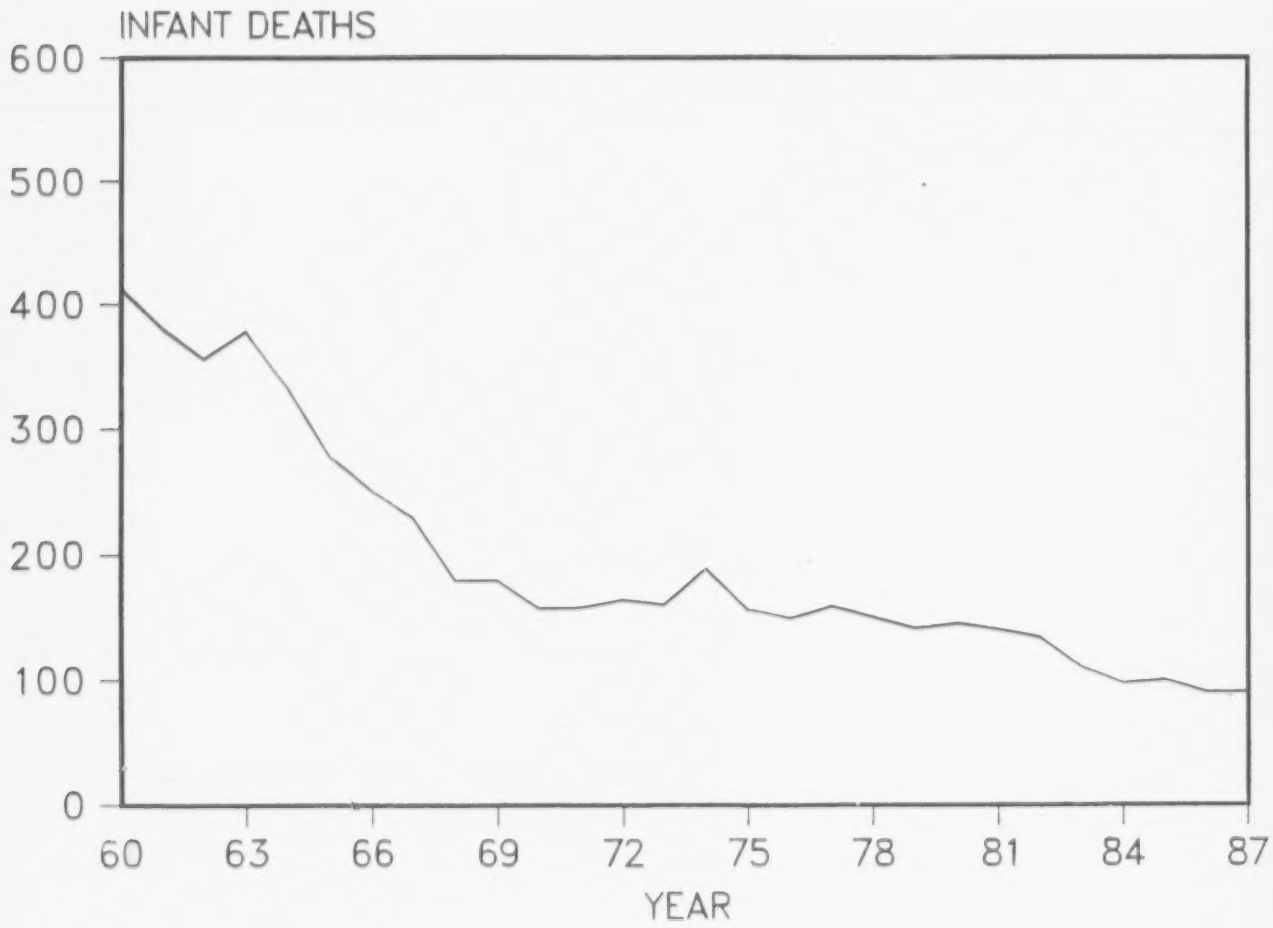
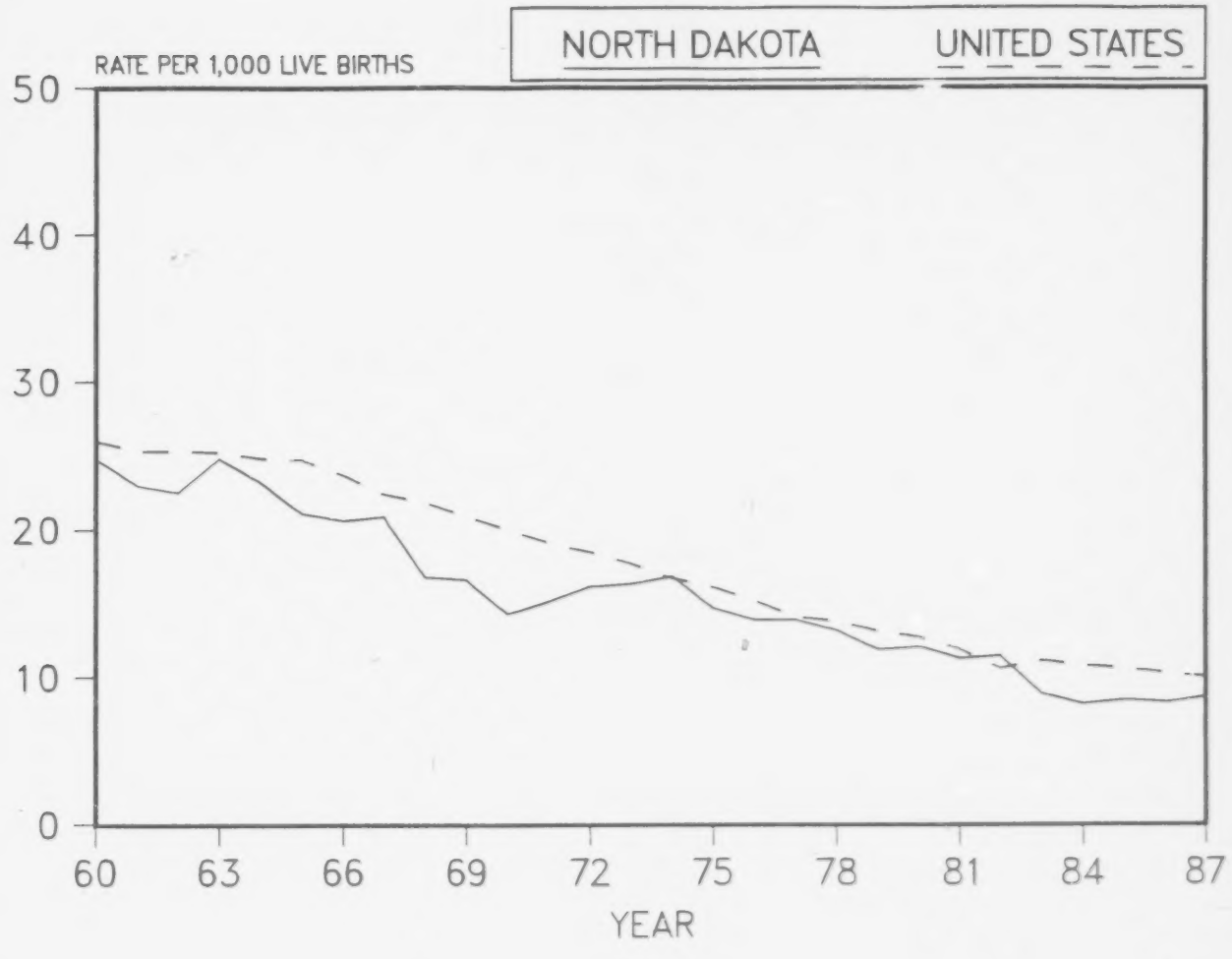


Table 2.15
Resident Infant Deaths and Infant Mortality Rates
North Dakota and United States
1960-1987

Year	United States		North Dakota	
	Number	Rate	Number	Rate
1960	110,873	26.0	414	24.8
1961	107,956	25.3	382	23.0
1962	105,479	25.3	357	22.5
1963	103,390	25.2	379	24.8
1964	99,783	24.8	334	23.2
1965	92,866	24.7	279	21.1
1966	85,516	23.7	251	20.6
1967	79,028	22.4	229	20.9
1968	76,263	21.8	179	16.8
1969	75,073	20.9	179	16.6
1970	74,667	20.0	157	14.3
1971	67,981	19.1	158	15.2
1972	60,182	18.5	164	16.2
1973	55,581	17.7	160	16.4
1974	52,776	16.7	169	16.9
1975	50,525	16.1	156	14.7
1976	48,265	15.2	149	13.9
1977	46,975	14.1	159	13.9
1978	45,945	13.8	150	13.2
1979	45,665	13.1	141	11.9
1980	45,526	12.7	145	12.1
1981	43,305	11.9	140	11.3
1982	42,401	11.5	134	10.6
1983	40,627	11.2	110	8.9
1984	39,580	10.8	97	8.2
1985	40,030	10.6	100	8.5
1986	38,360(1)	10.3	90	8.3
1987	38,380(1)	10.0	90	8.7

(1) U.S. Estimate

Figure 2.17
Resident Infant Death Rates
North Dakota and United States
1960-1987



During the period 1960-1987, North Dakota's infant death rate was generally below the corresponding national rate. In 1987 the national infant mortality rate was estimated at 10.0, slightly higher than the 8.7 experienced in North Dakota.

Approximately 56 percent of all infant deaths occurred within the first month of life in 1987, with about 50 percent in the first week. These proportions were 71.3 and 56.0 in 1978, respectively (Table 2.16). Figure 2.18 portrays infant death rates at age of death.

Infant mortality rates have historically been shown to vary with age of the mother and the race of the child. Infant mortality rates by age of mother and race of child are provided in Figure 2.19 and Table 2.17. These data are obtained from a file of merged live births and infant death information.

Table 2.16
Resident Infant Deaths and
Mortality Rates by Infant's Age at Death
North Dakota, 1978-1987

Year	Total Infant Deaths		Age at Death							
			Under 1 Day		1-6 Days		7-27 Days		28 Days-1 Year	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1978	150	13.2	46	4.1	38	3.3	23	2.0	43	3.8
1979	141	11.9	58	4.9	32	2.7	15	1.3	36	3.0
1980	145	12.1	44	3.7	27	2.3	21	1.8	53	4.4
1981	140	11.3	37	3.0	28	2.3	23	1.9	52	4.2
1982	134	10.6	50	4.0	24	1.9	12	0.9	48	3.8
1983	110	8.9	42	3.4	25	2.0	9	0.7	34	2.7
1984	97	8.2	30	2.5	13	1.1	11	0.9	43	3.6
1985	100	8.5	33	2.8	16	1.4	14	1.2	37	3.2
1986	90	8.3	32	3.0	6	0.6	5	0.5	47	4.3
1987	90	8.7	32	3.1	13	1.3	5	0.5	40	3.9

Figure 2.18
Resident Infant Death Rates by Age at Death
North Dakota, 1978-1987

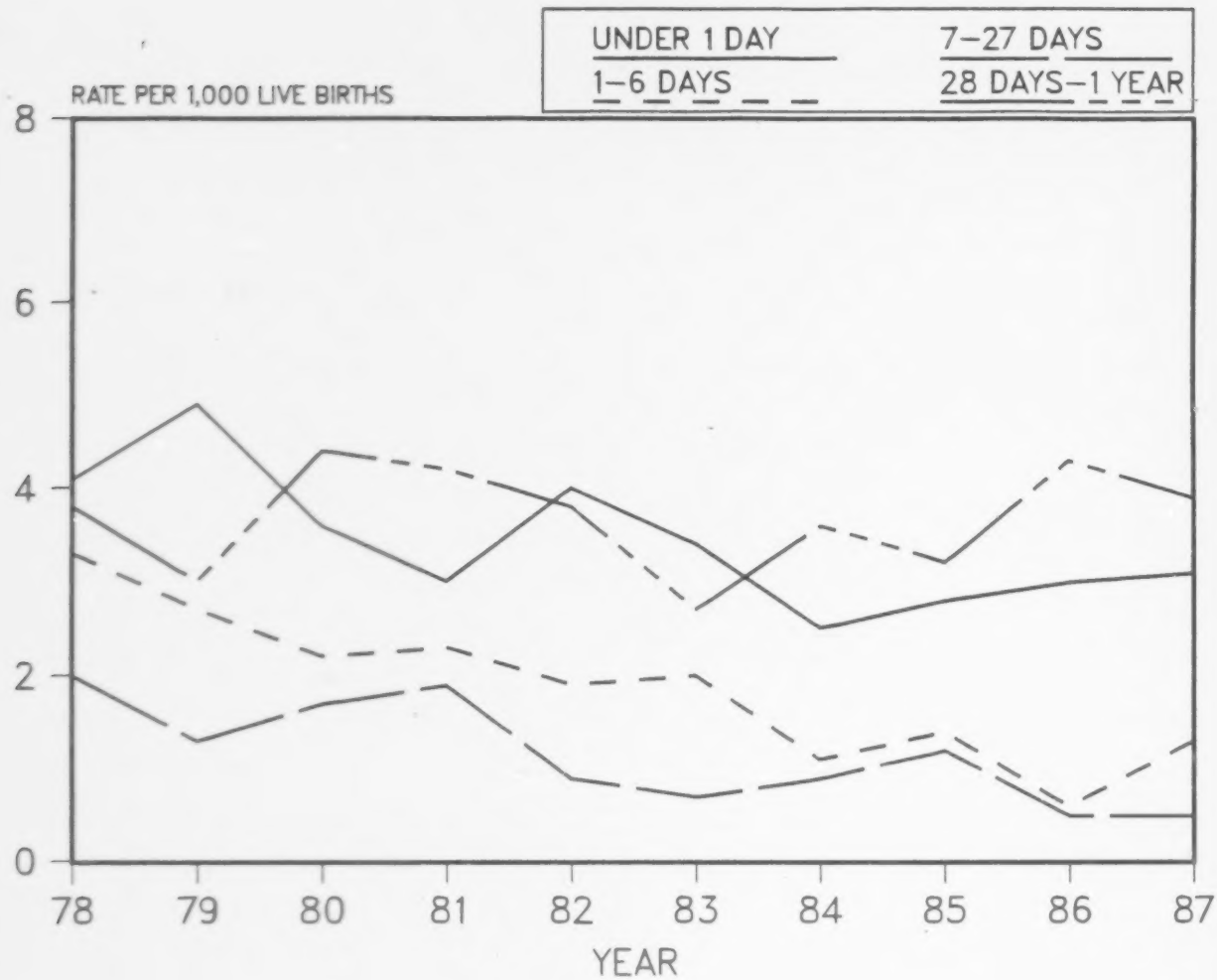


Figure 2.19
Resident Infant Death Rates by Age of Mother
North Dakota, 1987

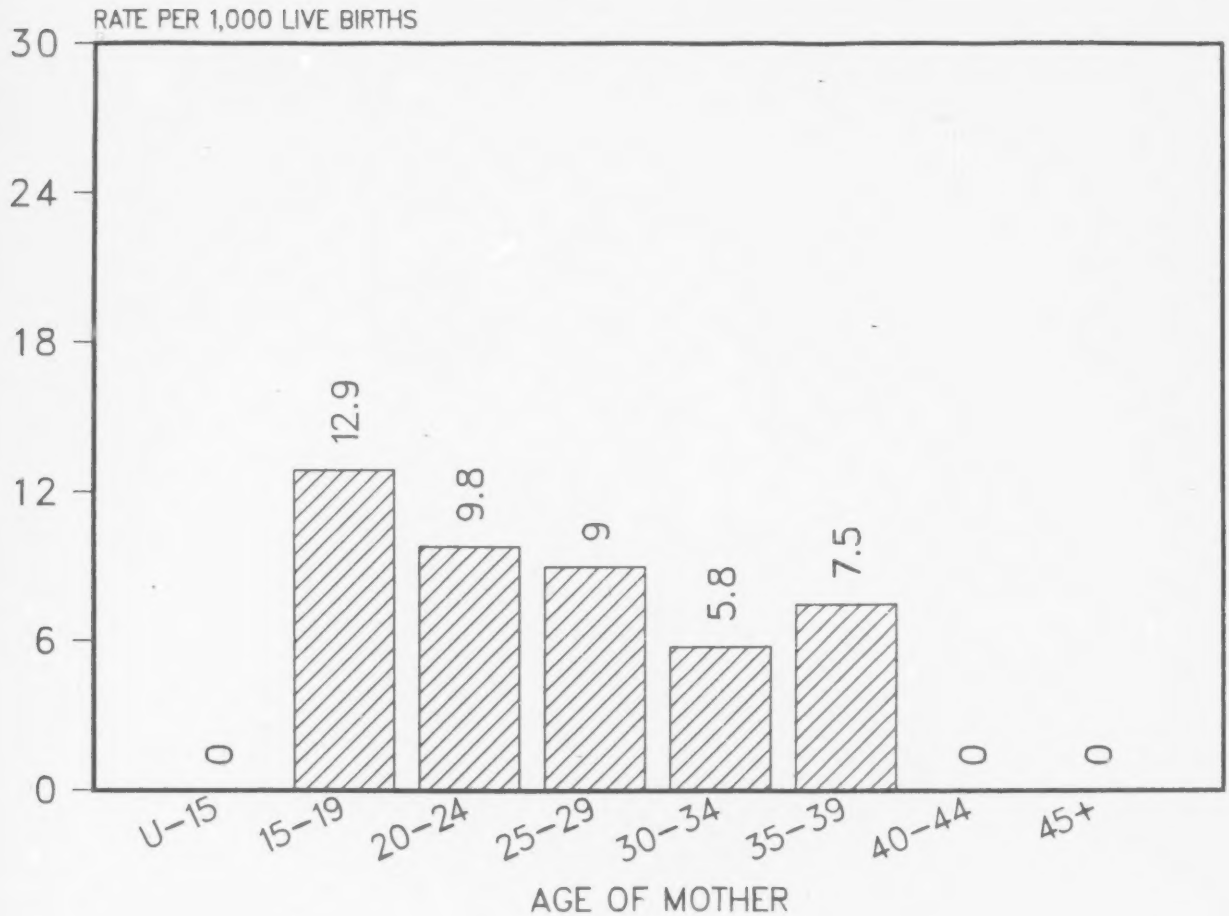


Table 2.17
Resident Infant Deaths and Infant Death Rates
by Age of Mother and Race of Infant
North Dakota, 1987

Age of Mother	Race of Infant							
	All Races		White		Native American		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Under 15 Years	--	--	--	--	--	--	--	--
15-19 Years	10	12.9	4	7.1	6	31.1	--	--
20-24 Years	29	9.8	25	9.9	4	11.3	--	--
25-29 Years	35	9.0	32	9.0	3	11.7	--	--
30-34 Years	12	5.8	11	5.8	1	8.3	--	--
35-39 Years	4	7.5	3	6.2	1	28.6	--	--
40-44 Years	--	--	--	--	--	--	--	--
45 Years and Over	--	--	--	--	--	--	--	--
Total	90	8.7	75	8.3	15	15.4	0	0.0

Infant death rates displayed somewhat of a parabolic relationship with mother's age. These rates were higher for infants born to younger and older mothers. In addition, Native American infants had higher infant mortality rates than those of white and other race infants.

Table 2.18 and Figure 2.20 show the variation in infant death rates according to number of prenatal visits. The highest infant death rates were to mothers having no visits (35.7) and 1-4 prenatal visits (36.1).

Table 2.19 and Figure 2.21 depict infant death rates as they relate to trimester prenatal care began. Infants whose mothers had no prenatal care experienced the highest infant death rate, 35.7.

The majority of infant deaths were attributable to three major causes: "congenital anomalies" (23 deaths), "SIDS" (15 deaths), and "other respiratory conditions of the fetus or newborn" (9 deaths) (Table 2.20 and Figure 2.22).

Table 2.18
Resident Infant Deaths and Infant Death Rates
by Prenatal Visits and Race of Mother
North Dakota, 1987

Number of Prenatal Visits	Race of Mother							
	All Races		White		Native American		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
None	2	35.7	2	57.1	--	--	--	--
1-4	15	36.1	14	54.7	1	6.5	--	--
5-9	50	14.3	38	12.1	12	38.3	--	--
10-14	14	2.6	14	2.8	--	--	--	--
15-19	4	5.3	3	4.5	1	22.2	--	--
20+	--	--	--	--	--	--	--	--
Not Stated	5	--	4	--	1	--	--	--
Total	90	8.7	75	8.1	15	18.1	0	0.0

Table 2.19
Resident Infant Deaths and Infant Deat Rates
by Trimester Prenatal Care Began and Race of Mother
North Dakota Infants, 1987

Trimester Prenatal Care Began	Race of Mother							
	All Races		White		Native American		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
None	2	35.7	2	57.1	--	--	--	--
First	69	8.3	57	7.5	12	23.4	--	--
Second	13	8.7	11	8.8	2	9.7	--	--
Third	--	--	--	--	--	--	--	--
Not Stated	6	--	5	--	1	--	--	--
Total	90	8.7	75	8.1	15	18.1	0	0.0

Figure 2.20
Resident Infant Death Rates by Prenatal Visits
North Dakota, 1987

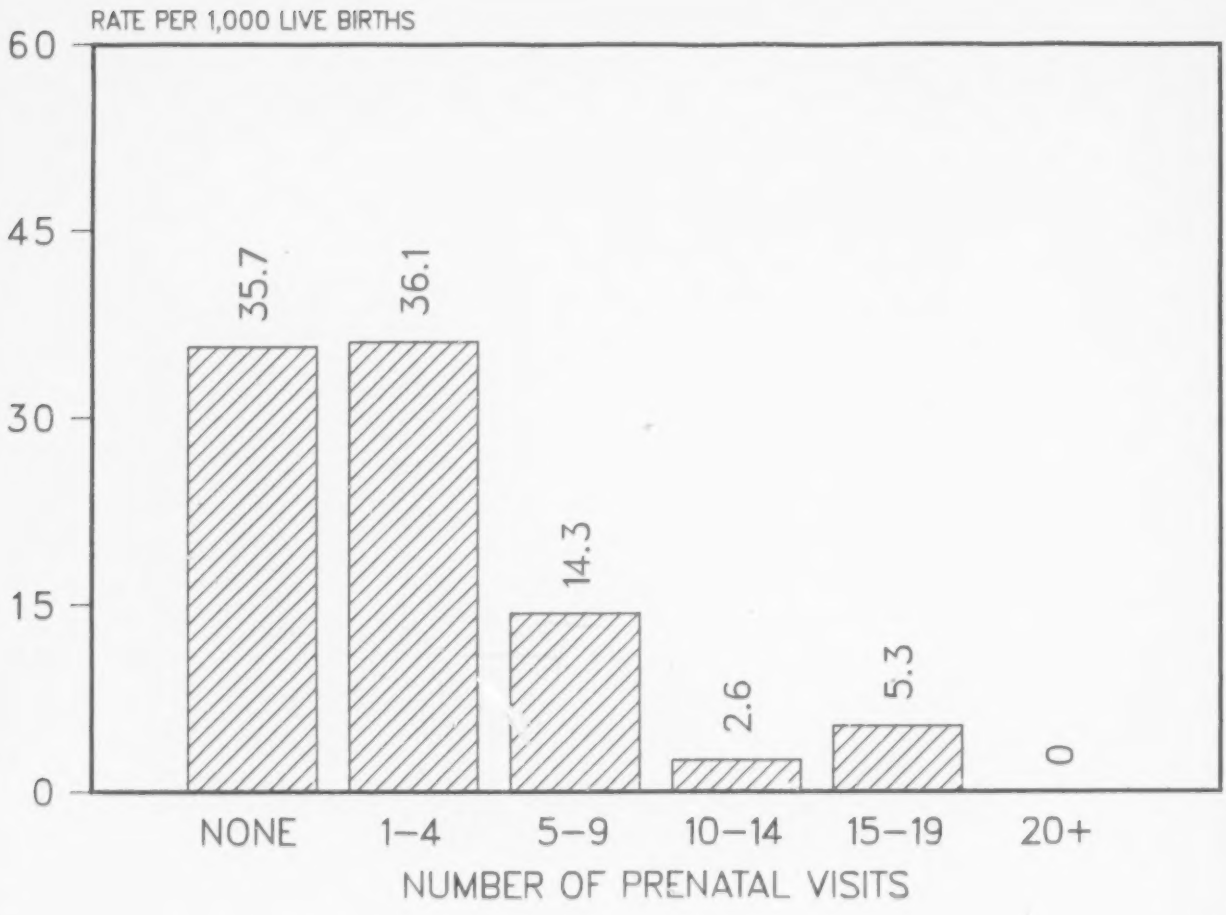


Figure 2.21
Resident Infant Death Rates
by Trimester Prenatal Care Began
North Dakota, 1987

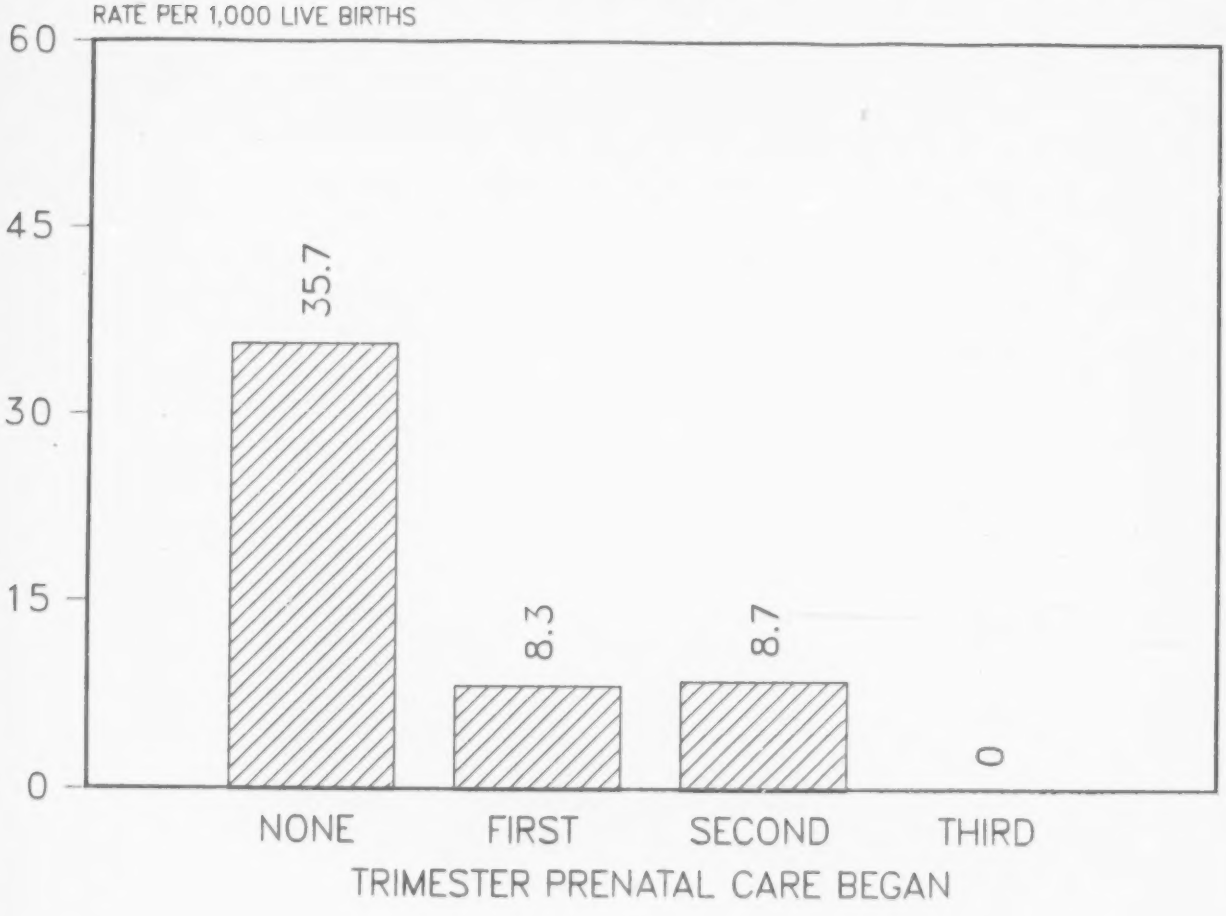
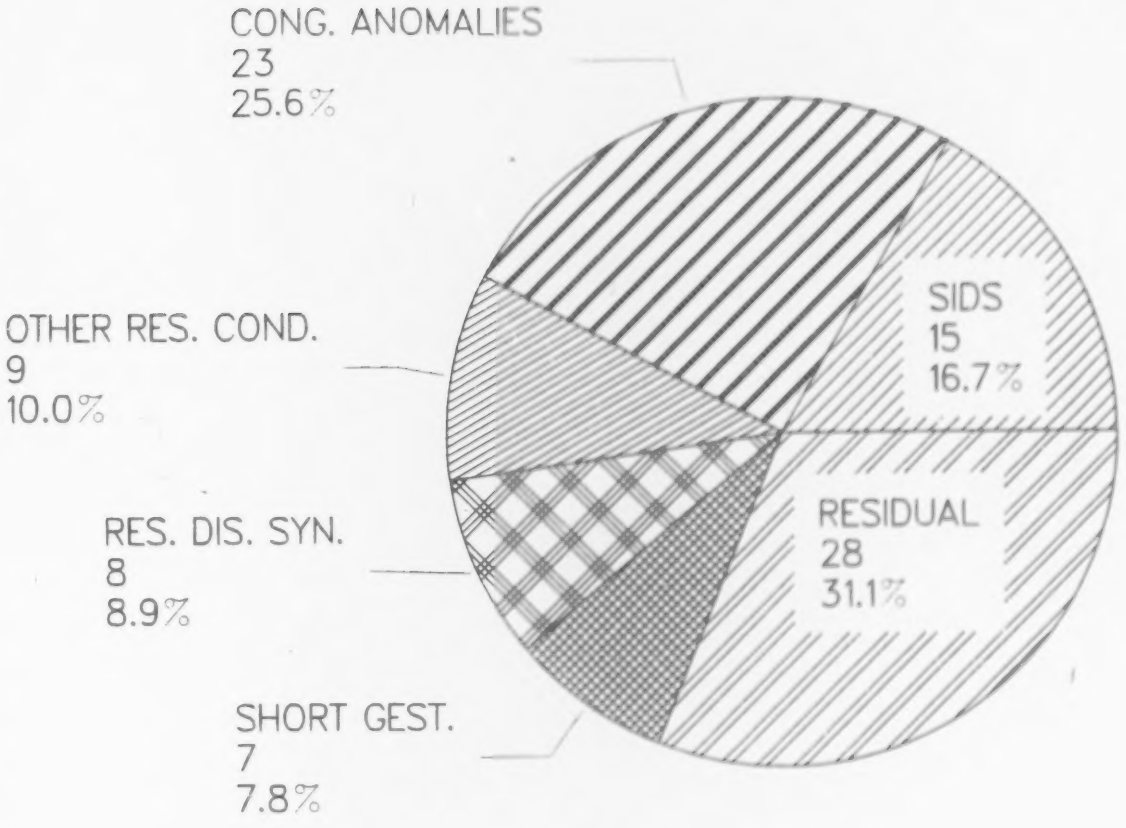


Table 2.20
Resident Infant Deaths by Cause of Death
North Dakota, 1987

ICDA Code	Cause of Death	Frequency
270-279	Other Metabolic and Immunity Disorders	2
320-326	Inflammatory Diseases of the Central Nervous System	1
330-337	Hereditary and Degenerative Diseases of the Central Nervous System	1
390-398, 402 404-429	Diseases of the Heart	2
480-487	Influenza and Pneumonia	1
490-496	Chronic Obstructive Pulmonary Disease	1
500-508	Pneumoconioses and Other Lung Diseases Due to External Agents	1
550-553	Hernia of the Abdominal Cavity	1
570-579	Other Diseases of the Digestive System	1
740-759	Congenital Anomalies	23
760	Fetus or Newborn Affected by Maternal Conditions Which May Be Unrelated to Present Pregnancy	1
761	Fetus or Newborn Affected by Maternal Complications of Pregnancy	1
762	Fetus or Newborn Affected by Complications of Placenta, Cord, and Membranes	2
765	Disorders Relating to Short Gestation and Unspecified Low Birth Weight	7
767	Birth Trauma	1
768	Intrauterine Hypoxia and Birth Asphyxia	2
769	Respiratory Distress Syndrome	8
770	Other Respiratory Conditions of Fetus or Newborn	9
771	Infections Specific to the Perinatal Period	1
772	Fetal and Neonatal Hemorrhage	2
775	Endocrine and Metabolic Disturbances Specific to the Fetus and Newborn	1
776	Hematological Disorders of the Fetus and Newborn	1
779	Other Ill-Defined Conditions Originating in the Perinatal Period	3
798	Sudden Death, Cause Unknown	15
E830-E838	Water Transport Accidents	1
E878-E879	Surgical and Medical Procedures as the Cause of Abnormal Reaction of Patient or Later Complications Without Mention of Misadventure at the Time of Procedure	1
	Total	90

Figure 2.22
Resident Infant Deaths by Cause of Death
North Dakota, 1987



Fetal Deaths

In 1987, 55 resident fetal deaths were reported in North Dakota. The largest and smallest corresponding number of fetal deaths were experienced in 1961 and 1987, respectively (Figure 2.23 and Table 2.21).

Since 1960 the fetal death ratio, which relates fetal deaths to live births, has generally been declining both nationally and within North Dakota. The largest reported state ratio was 13.8 experienced in 1966, while the smallest corresponding ratio was 5.3 reported in 1985 and 1987 (Figure 2.24 and Table 2.21).

Figure 2.23
Resident Fetal Deaths
North Dakota, 1960-1987

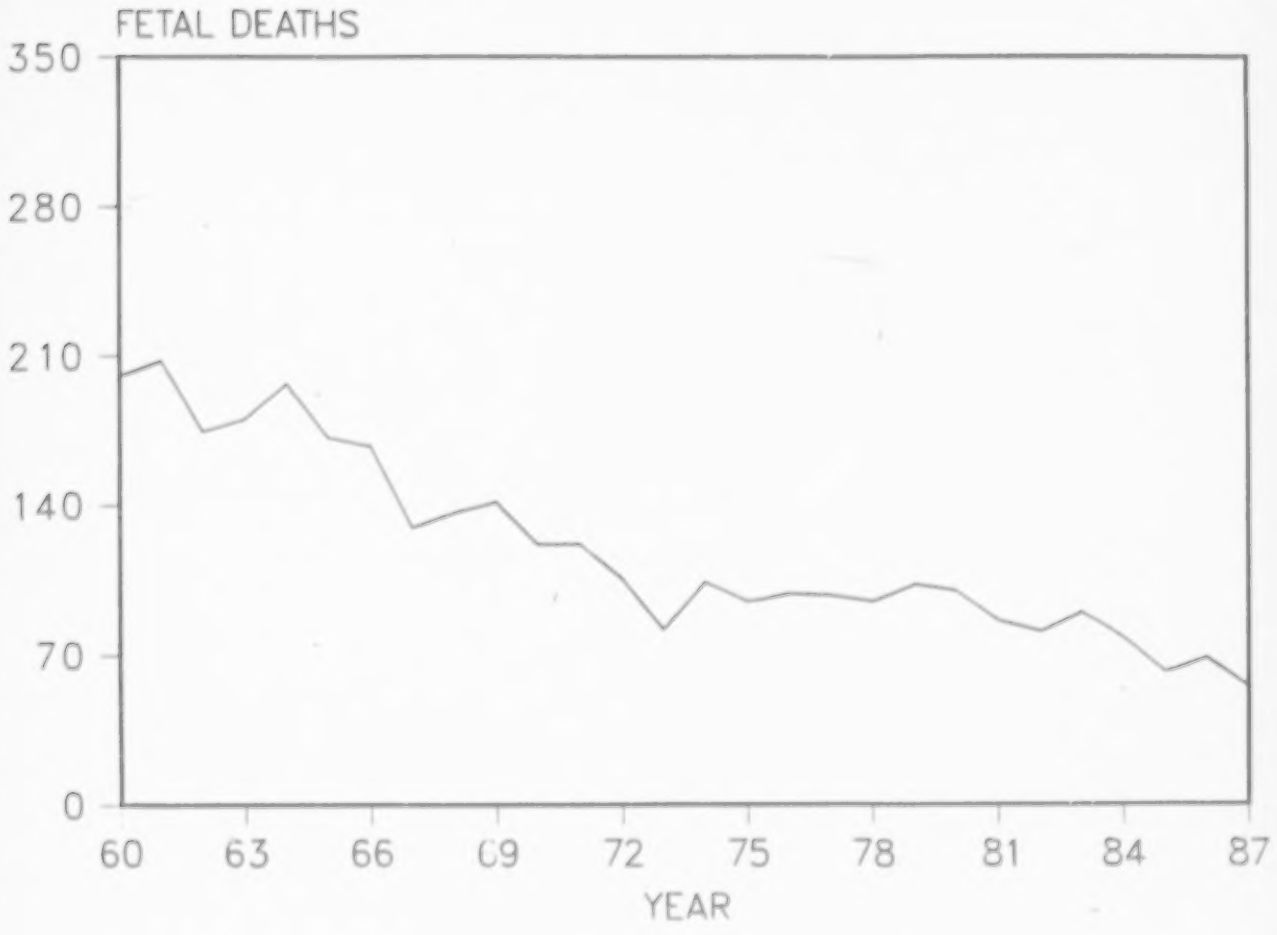
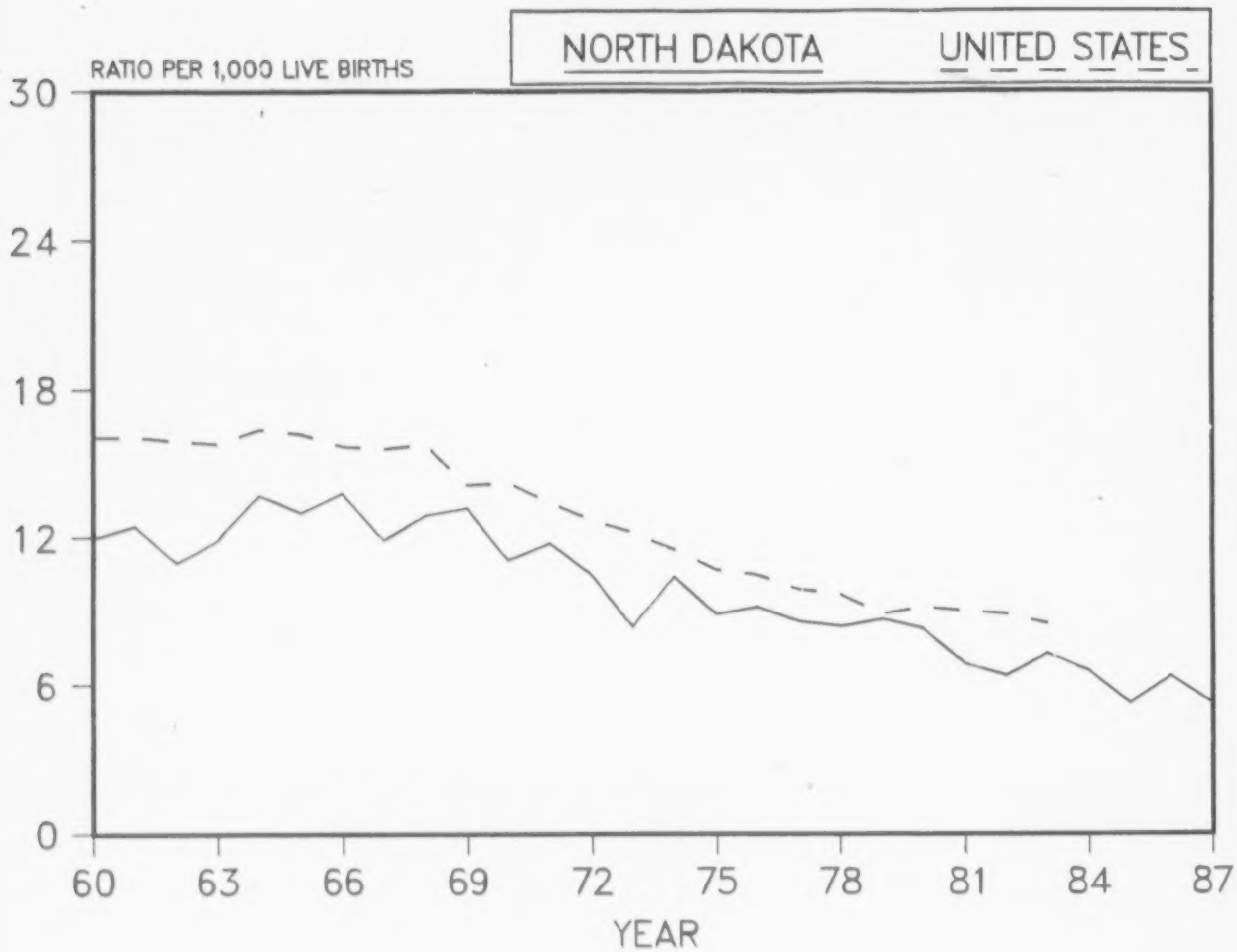


Table 2.21
Resident Fetal Deaths and Fetal Death Ratios
North Dakota and United States
1960-1987

Year	United States		North Dakota	
	Fetal Deaths	Fetal Death Ratios	Fetal Deaths	Fetal Death Ratios
1960	68,480	16.1	201	12.0
1961	68,767	16.1	208	12.5
1962	66,421	15.9	175	11.0
1963	64,640	15.8	181	11.9
1964	65,931	16.4	197	13.7
1965	60,859	16.2	172	13.0
1966	56,637	15.7	168	13.8
1967	54,934	15.6	130	11.9
1968	55,293	15.8	137	12.9
1969	50,749	14.1	142	13.2
1970	52,961	14.2	122	11.1
1971	47,818	13.4	122	11.8
1972	41,380	12.7	106	10.5
1973	38,309	12.2	82	8.4
1974	36,281	11.5	104	10.4
1975	33,796	10.7	95	8.9
1976	33,111	10.5	99	9.2
1977	33,053	9.9	98	8.6
1978	32,301	9.7	95	8.4
1979	30,969	8.9	103	8.7
1980	33,353	9.2	100	8.3
1981	32,596	9.0	86	6.9
1982	32,694	8.9	81	6.4
1983	30,752	8.5	90	7.3
1984	--(1)	--	78	6.6
1985	--(1)	--	62	5.3
1986	--(1)	--	69	6.4
1987	--(1)	--	55	5.3

(1) Not Available

Figure 2.24'
Resident Fetal Death Ratios
North Dakota and United States
1960-1987



Causes of Fetal Deaths

A classification of fetal deaths by underlying cause is contained in Table 2.22. Due to a relatively large number of deaths allocated to "other and ill-defined conditions" (25.5 percent), caution should be used when attempting to draw specific inferences regarding cause of death.

In 1987 nearly one-half of the fetal deaths were attributed to one general condition, "complications of the placenta, cord, and membranes" (25 fetal deaths).

Table 2.22
Resident Fetal Deaths by Cause of Death
North Dakota, 1987

ICD Code	Cause of Death	Frequency
748	Congenital Anomalies of the Respiratory System	1
752	Congenital Anomalies of the Genital Organs	1
759	Other and Unspecified Congenital Anomalies	2
760	Fetus Affected by Maternal Conditions Which May be Unrelated to Present Pregnancy	3
761	Fetus Affected by Maternal Complications of Pregnancy	6
762	Fetus Affected by Complications of Placenta, Cord, and Membranes	25
765	Disorders Relating to Short Gestation and Unspecified Low Birth Weight	1
771	Infections Specific to the Perinatal Period	2
779	Other and Ill-Defined Conditions Originating in the Perinatal Period	14
	Total	55

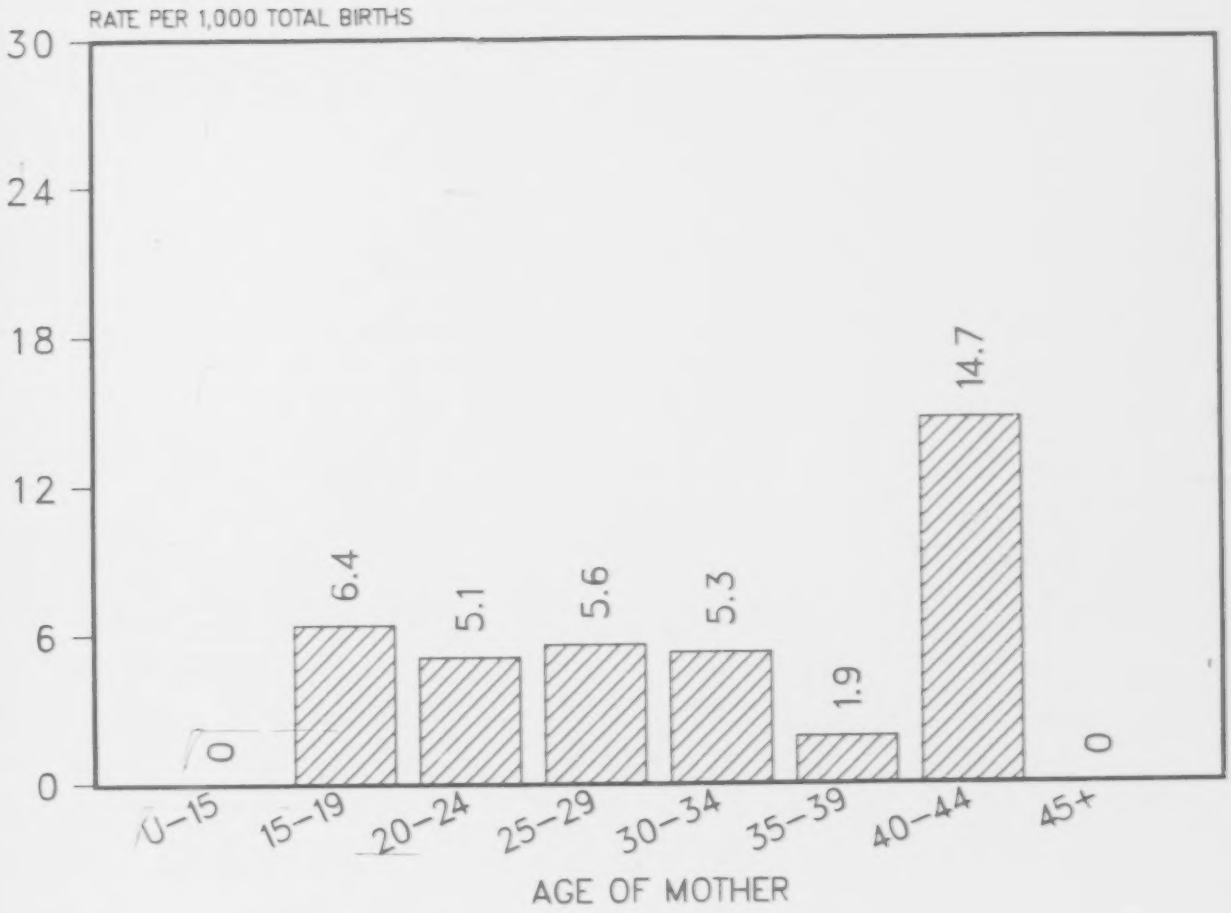
Age of Mother and Race of Fetus

The overall fetal death rate per 1,000 total births (live births plus fetal deaths) was 5.3 in 1987. The rates associated with white, Native American, and other races fetuses were 5.6, 3.1, and 4.0, respectively. Fetal death rates displayed somewhat of a parabolic relationship with respect to mother's age. Associated rates were generally higher with younger and older age females. Table 2.23 and Figure 2.25 depicts this relationship.

Table 2.23
Resident Fetal Deaths and Fetal Death Rates
by Age of Mother and Race of Fetus
North Dakota, 1987

Age of Mother	Race of Fetus							
	All Races		White		Native American		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Under 15 Years	--	--	--	--	--	--	--	--
15-19 Years	5	6.4	4	7.0	1	5.2	--	--
20-24 Years	15	5.1	13	5.1	2	5.6	--	--
25-29 Years	22	5.6	21	5.9	--	--	1	12.3
30-34 Years	11	5.3	11	5.8	--	--	--	--
35-39 Years	1	1.9	1	2.1	--	--	--	--
40-44 Years	1	14.7	1	16.7	--	--	--	--
45 Years and Over	--	--	--	--	--	--	--	--
Total	55	5.3	51	5.6	3	3.1	1	4.0

Figure 2.25
Resident Fetal Death Rates by Age of Mother
North Dakota, 1987



Prenatal Care - Fetal Deaths

Of the 55 fetal deaths recorded in 1987, 16 (29.1 percent) of the records indicated that the mother had less than 5 prenatal visits (Tables 2.24 and 2.25 and Figures 2.26 and 2.27).

Table 2.24
Resident Fetal Deaths and Fetal Death Rates
by Number of Prenatal Visits and Race of Mother
North Dakota, 1987

Number of Prenatal Visits	Race of Mother							
	All Races		White		Native American		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
None	--	--	--	--	--	--	--	--
1-4	16	37.0	14	51.9	2	12.9	--	--
5-9	23	6.6	22	7.0	--	--	1	26.3
10-14	10	1.9	10	2.0	--	--	--	--
15-19	1	1.3	--	--	1	21.7	--	--
20+	1	8.7	1	10.4	--	--	--	--
Not Stated	4	--	4	--	--	--	--	--
Total	55	5.3	51	5.5	3	3.6	1	4.8

Table 2.25
Resident Fetal Deaths and Fetal Death Rates
by Trimester Prenatal Care Began and Race of Mother
North Dakota, 1987

Trimester Prenatal Care Began	Race of Mother							
	All Races		White		Native American		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
None	--	--	--	--	--	--	--	--
First	38	4.6	35	4.6	2	3.9	1	6.1
Second	5	3.3	5	4.0	--	--	--	--
Third	1	4.1	--	--	1	13.9	--	--
Not Stated	11	--	11	--	--	--	--	--
Total	55	5.3	51	5.5	3	3.6	1	4.8

Figure 2.26
Resident Fetal Death Rates by
Number of Prenatal Visits
North Dakota, 1987

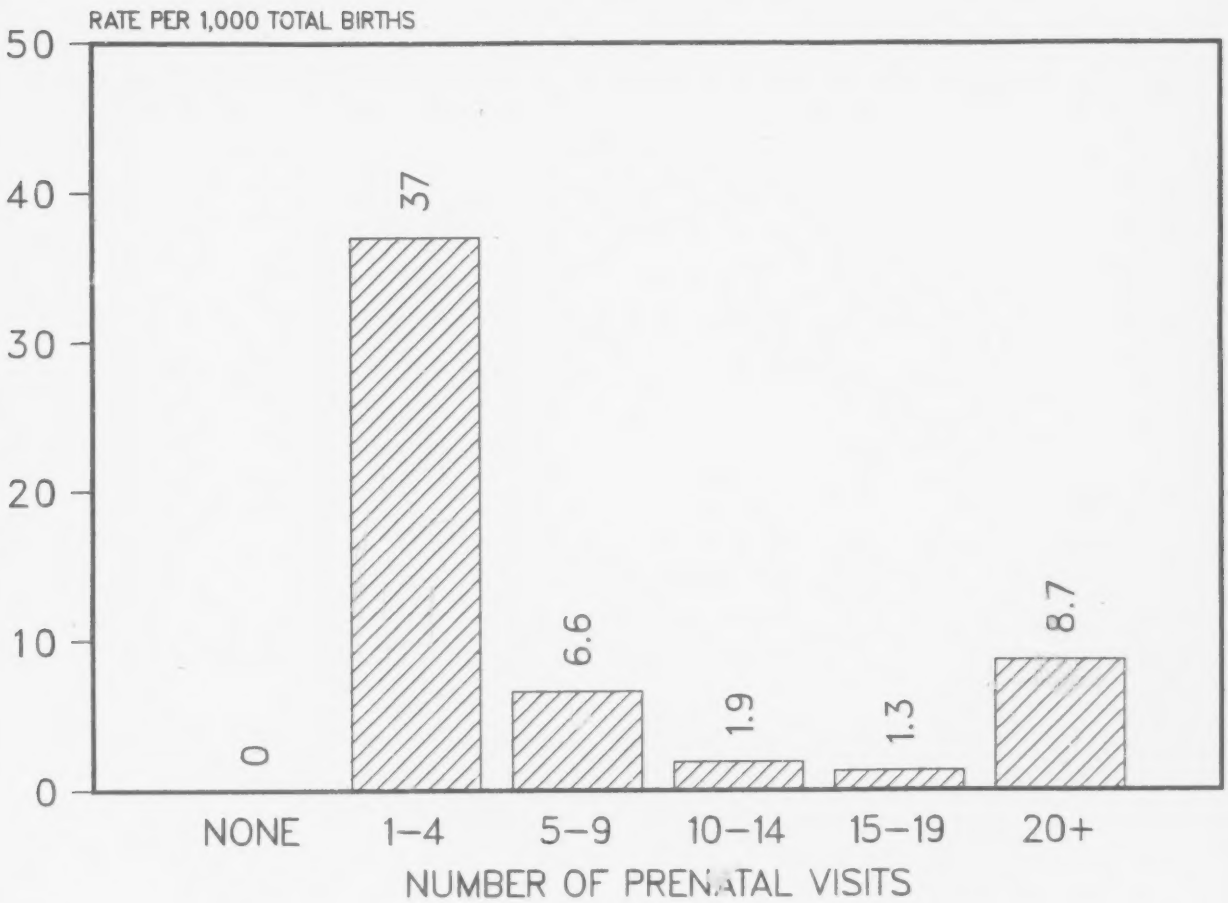
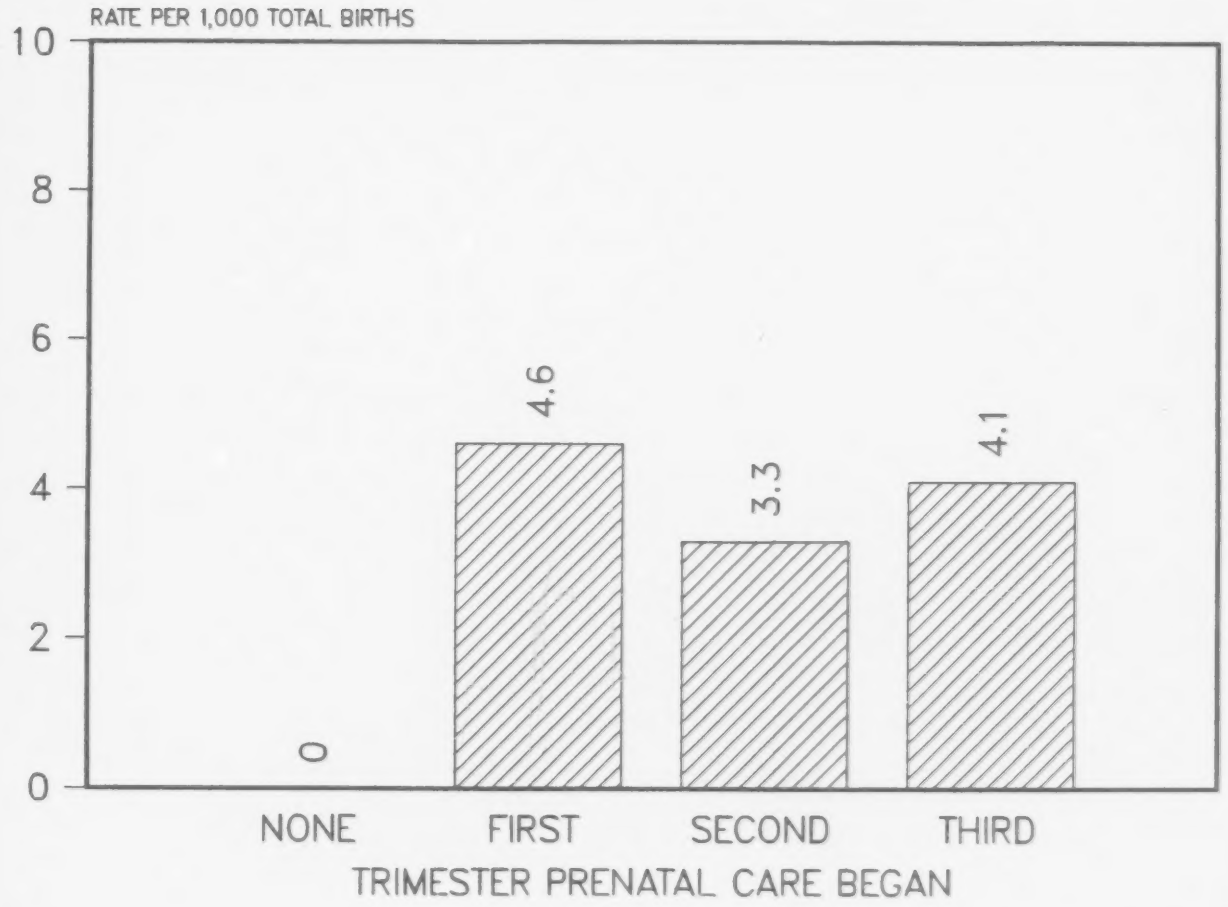
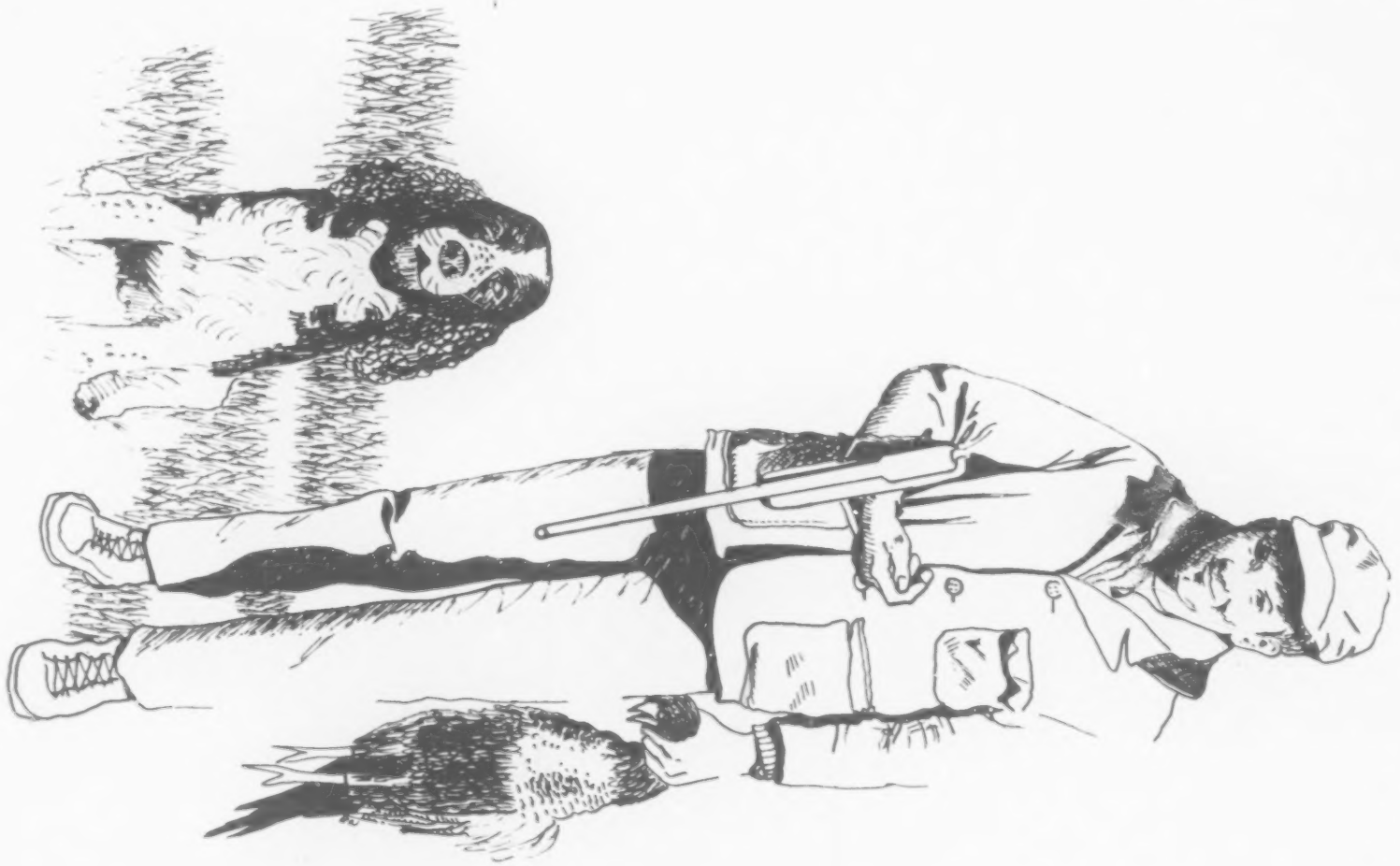


Figure 2.27
Resident Fetal Death Rates
by Trimester Prenatal Care Began
North Dakota, 1987





MARRIAGE and DIVORCE

Marriage and Divorce:
An Overview 1987

Total Marriages	5,028
Marriage Rate	7.5
Total Divorces and Annulments	2,256
Divorce Rate	3.4
Median Duration of Marriage at Divorce	7.4

Marriage and Divorce

The number of marriages and divorces occurring annually in North Dakota has generally increased since 1960. The smallest number of marriages during the 1960 to 1987 time period was 4,041 in 1960, while the largest number was 6,204 reported in 1981. The smallest and largest numbers of divorces and annulments were witnessed in 1960 (596) and 1983 (2,336), respectively (Figures 3.1 and 3.2 and Tables 3.1 and 3.2).

Figure 3.1
Marriages
North Dakota Occurrences
1960-1987

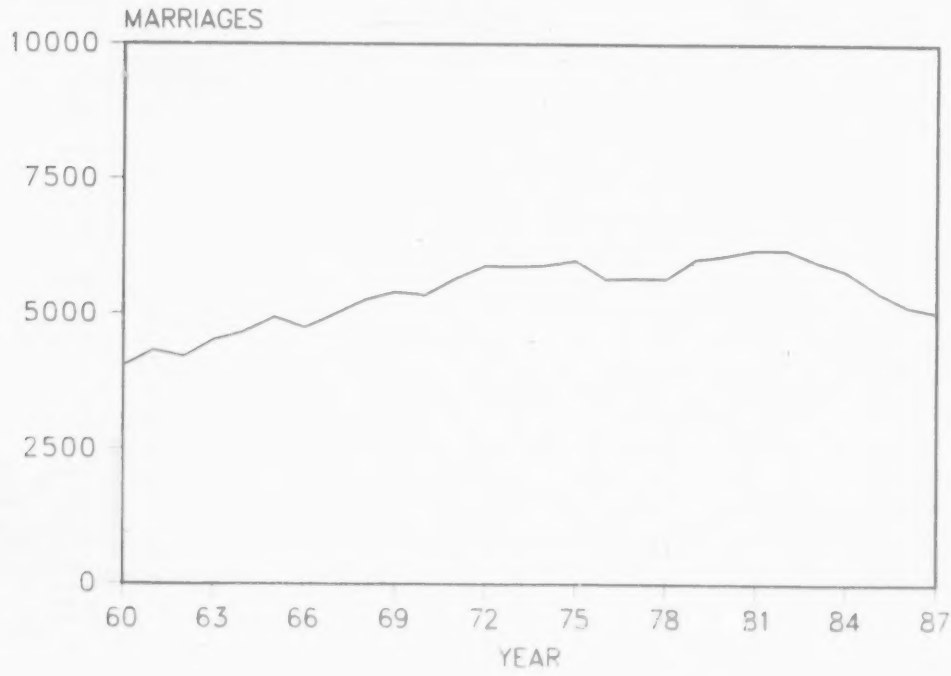


Figure 3.2
Divorces and Annulments
North Dakota Occurrences
1960-1987

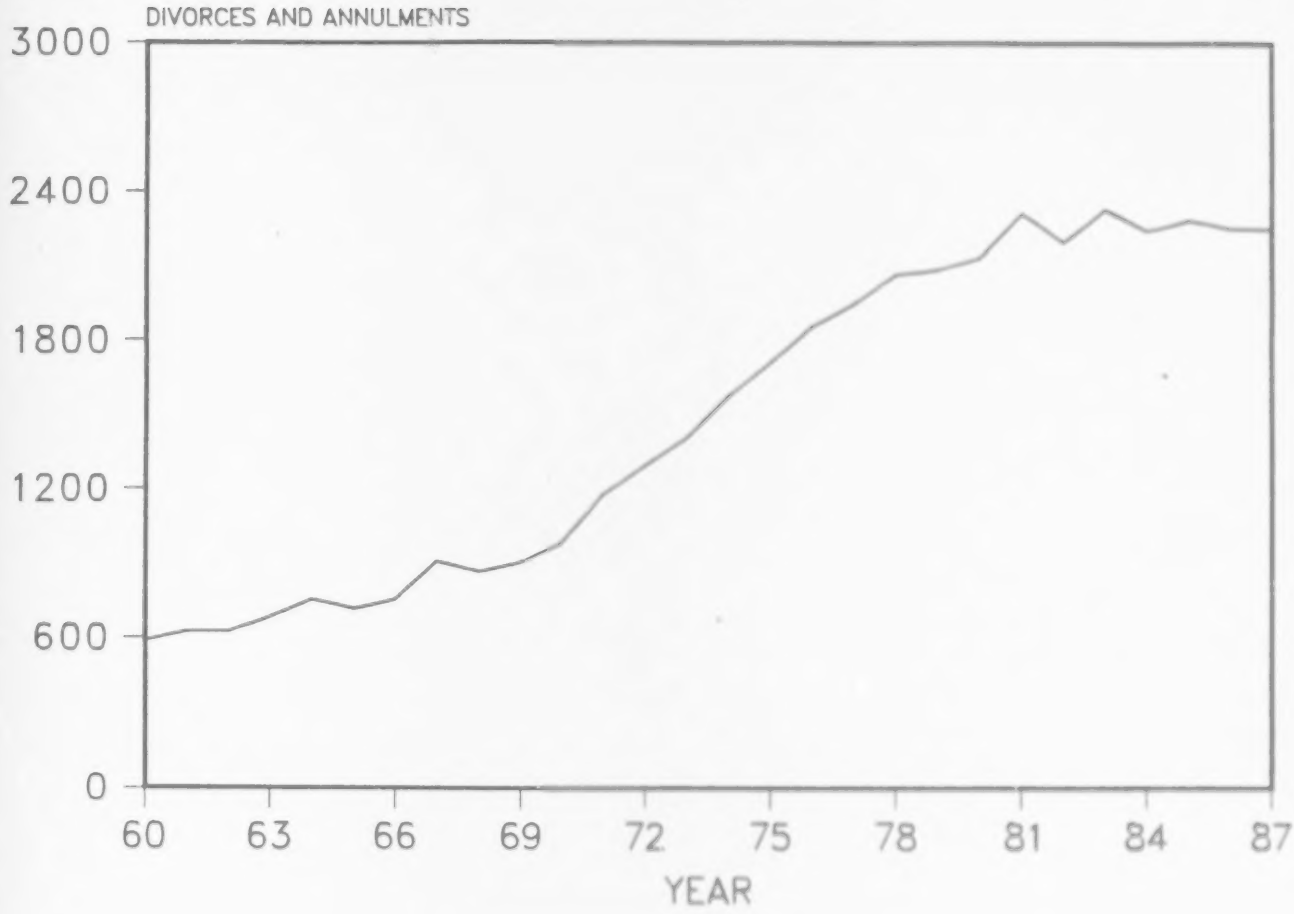


Table 3.1
Marriages and Marriage Rates
North Dakota and United States Occurrences
1960-1987

Year	United States		North Dakota	
	Number	Rate	Number	Rate
1960	1,523,000	8.5	4,041	6.4
1961	1,548,000	8.4	4,335	6.8
1962	1,577,000	8.5	4,212	6.6
1963	1,654,000	8.8	4,531	7.0
1964	1,725,000	9.0	4,675	7.2
1965	1,800,000	9.3	4,939	7.6
1966	1,857,000	9.5	4,740	7.3
1967	1,927,000	9.7	4,990	7.9
1968	2,069,000	10.4	5,251	8.4
1969	2,145,000	10.6	5,399	8.8
1970	2,158,802	10.5	5,340	8.6
1971	2,190,481	10.5	5,648	9.0
1972	2,282,154	10.9	5,886	9.3
1973	2,284,108	10.8	5,874	9.3
1974	2,229,667	10.4	5,905	9.3
1975	2,152,662	10.0	5,993	9.4
1976	2,154,807	9.9	5,649	8.7
1977	2,178,367	9.9	5,668	8.7
1978	2,282,272	10.3	5,651	8.7
1979	2,331,337	10.4	6,022	9.2
1980	2,390,252	10.5	6,093	9.3
1981	2,422,145	10.5	6,204	9.4
1982	2,456,278	10.6	6,195	9.2
1983	2,445,604	10.5	5,976	8.8
1984	2,487,000(1)	10.5	5,796	8.4
1985	2,425,000(1)	10.1	5,424	7.9
1986	2,400,000(1)	10.0	5,148	7.6
1987	2,421,000(1)	10.0	5,028	7.5

(1) U.S. Estimate

Table 3.2
Divorces and Annulments
and Divorce and Annulment Rates
North Dakota and United States
1960-1987

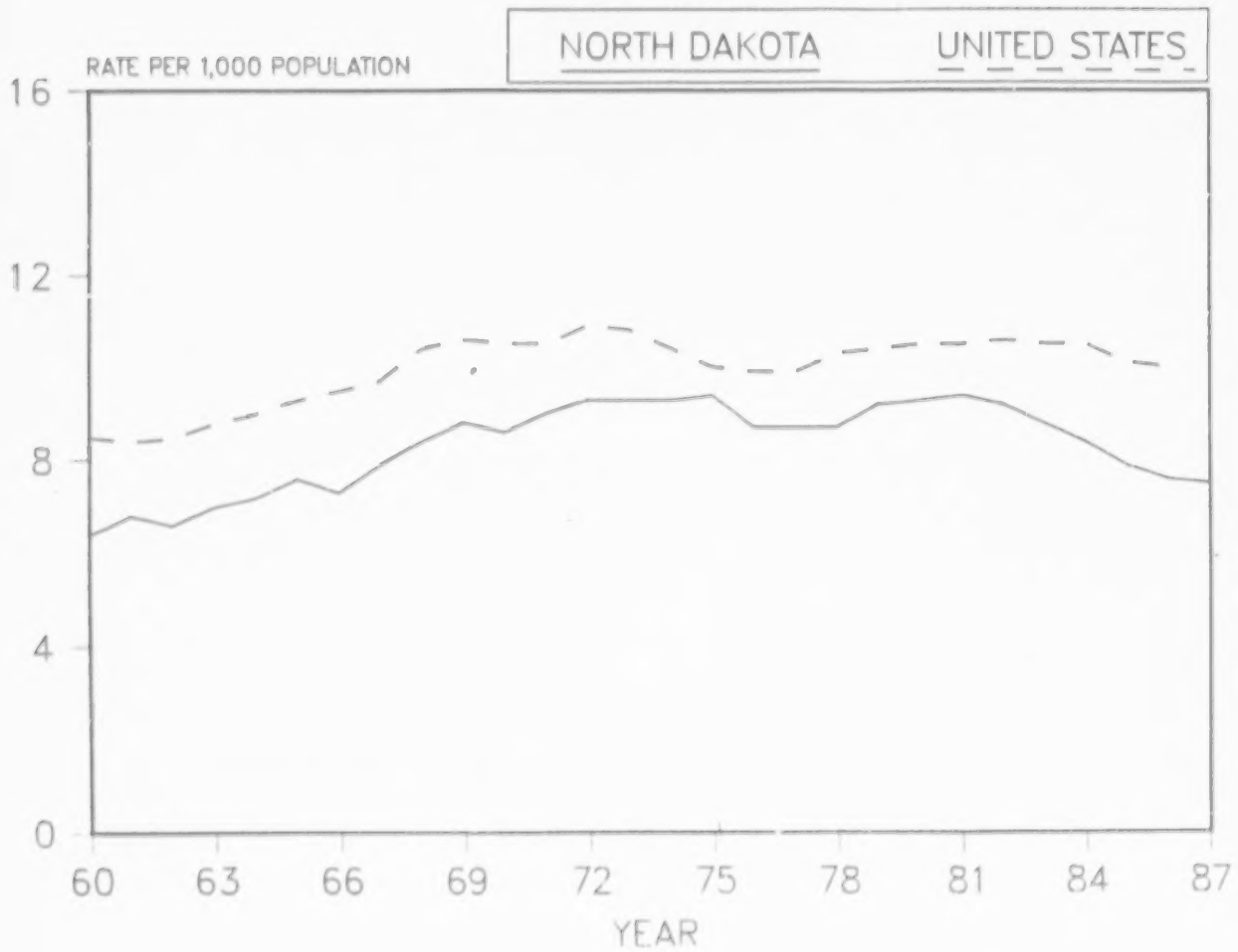
Year	United States		North Dakota	
	Number	Rate	Number	Rate
1960	393,000	2.2	596	0.9
1961	414,000	2.3	633	1.0
1962	413,000	2.2	631	1.0
1963	428,000	2.3	689	1.1
1964	450,000	2.4	758	1.2
1965	479,000	2.5	720	1.1
1966	499,000	2.5	759	1.2
1967	523,000	2.6	909	1.4
1968	584,000	2.9	868	1.4
1969	639,000	3.2	908	1.5
1970	708,000	3.5	985	1.6
1971	773,000	3.7	1,181	1.9
1972	845,000	4.0	1,298	2.1
1973	915,000	4.3	1,409	2.2
1974	977,000	4.6	1,578	2.5
1975	1,036,000	4.8	1,714	2.7
1976	1,083,000	5.0	1,861	2.9
1977	1,091,000	5.0	1,952	3.0
1978	1,130,000	5.1	2,071	3.2
1979	1,181,000	5.2	2,095	3.2
1980	1,189,000	5.2	2,142	3.3
1981	1,213,000	5.3	2,319	3.5
1982	1,170,000	5.0	2,202	3.3
1983	1,158,000	4.9	2,336	3.4
1984	1,169,000	5.0	2,249	3.3
1985	1,187,000(1)	5.0	2,295	3.4
1986	1,159,000(1)	4.8	2,261	3.3
1987	1,157,000(1)	4.8	2,256	3.4

(1) U.S. Estimate

Marriage

Since 1960 there have been noticeable shifts in marriage rates nationally and in North Dakota (Figure 3.3). The marriage rates observed for this state have generally followed the pattern of rising and falling rates observed nationally. The number of persons married each year per 1,000 population was higher nationally than in the state for each reporting time period, i.e., 1960-1987. The highest marriage rate reported in North Dakota was 9.4 in 1975 and 1981, while the lowest was 6.4 in 1960.

Figure 3.3
Marriage Rates
North Dakota and United States Occurrences
1960-1987



Age at Marriage

Examination of Table 3.3 indicates that during 1987 females married at younger ages than did males. More than three and one half times the number of females married under the age of 20, compared to their male counterparts, while in the 25 and older age groups males married more frequently than females. The median age for brides in 1987 was 24, while the median for grooms was 27.

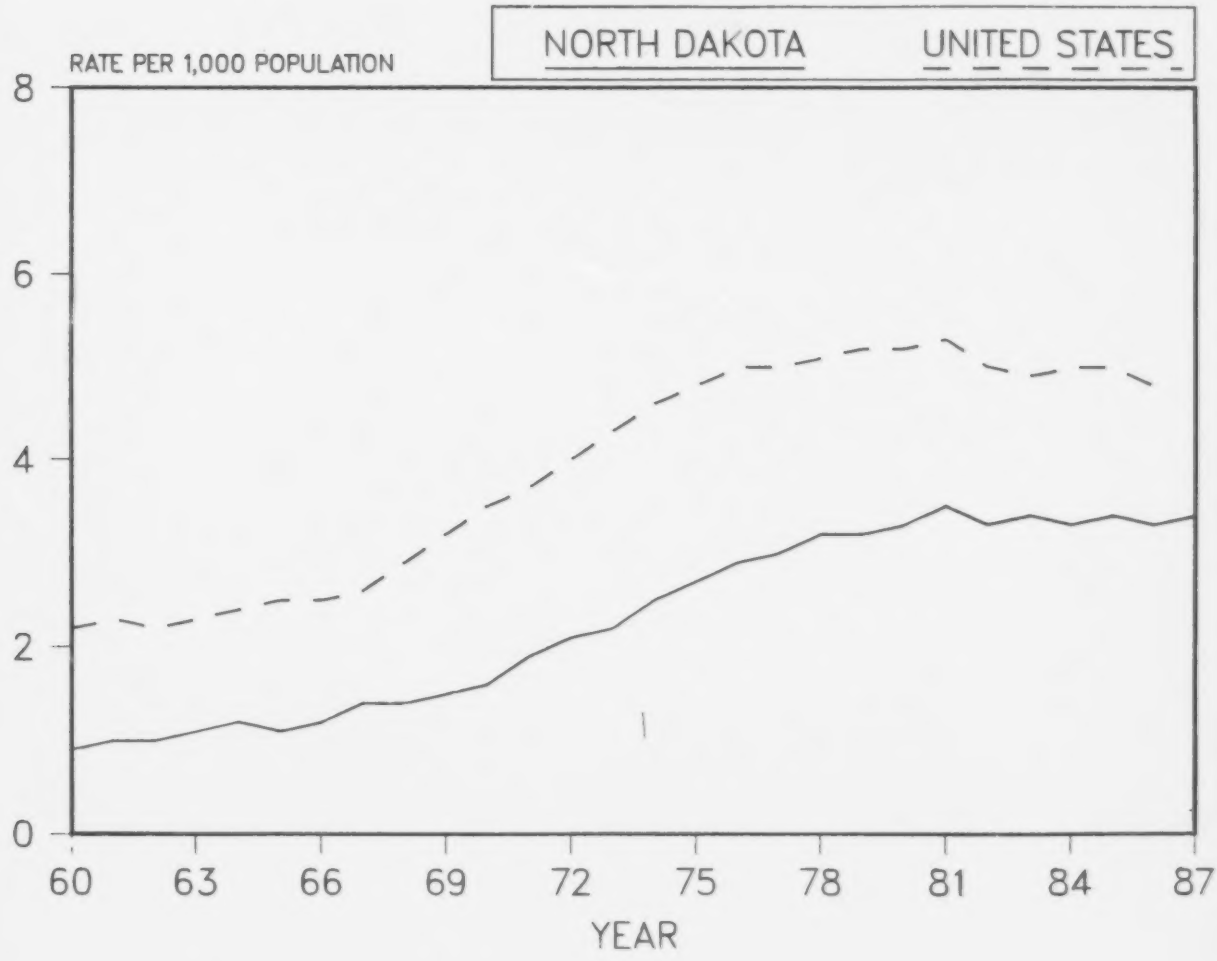
Table 3.3
Marriages by Age and Sex
North Dakota Occurrences
1987

Ages	Number of Marriages	
	Males	Females
Under 20 Years	174	627
20-24 Years	1,879	2,182
25-29 Years	1,495	1,107
30-39 Years	954	741
40-49 Years	285	204
50-59 Years	111	71
60-69 Years	78	67
70 Years and Over	52	29
Total	5,028	5,028
Median Age	27	24

Divorce and Annulment

During the 1960-1987 time period North Dakota and United States divorce and annulment rates followed a similar pattern, one of significant growth (Figure 3.4). Although the pattern has been nearly identical, nationwide rates have been consistently higher than corresponding state divorce and annulment rates. Since 1960 the lowest divorce and annulment rate was reported in 1960 (0.9), while the highest similar state rate was in 1981 (3.5).

Figure 3.4
Divorce and Annulment Rates
North Dakota and United States Occurrences
1960-1987



Duration of Marriage at Divorce

The median duration of marriage at divorce was 7.4 years in 1987. The largest percentage of divorces and annulments occurred in the 1-4 year cohort (Table 3.4).

Minor Children of Divorced Couples

The number of children under 18 affected by divorces in 1987 was 2,571 (Table 3.5), while the average number of children per divorce was 1.1.

Table 3.4
Divorces and Annulments by Duration of Marriage
North Dakota Occurrences
1987

Duration in Years	Frequency	Percent
Under 1 Year	94	4.2
1-4 Years	728	32.3
5-9 Years	644	28.5
10-14 Years	327	14.5
15-19 Years	192	8.5
20-24 Years	140	6.2
25-29 Years	70	3.1
30-34 Years	25	1.1
35-39 Years	22	1.0
40-49 Years	11	0.5
50 Years and Over	2	0.0
Not Stated	1	0.0
Total	2,256	100.0
Median Duration	7.4 Years	

Table 3.5
Divorces by Children Affected
North Dakota Occurrences
1987

Children Affected	Frequency	Percent
0	841	37.2
1	577	25.6
2	572	25.3
3	205	9.1
4	43	1.9
5 or More	12	0.5
Not Stated	1	0.0
Total Divorces	2,251	100.0
Total Children Affected	2,571	N/A

71464

Induced Terminations of Pregnancy:
An Overview 1987

Total Induced Terminations (Occurrences)	2,562
Total Induced Terminations (Residents)	1,340

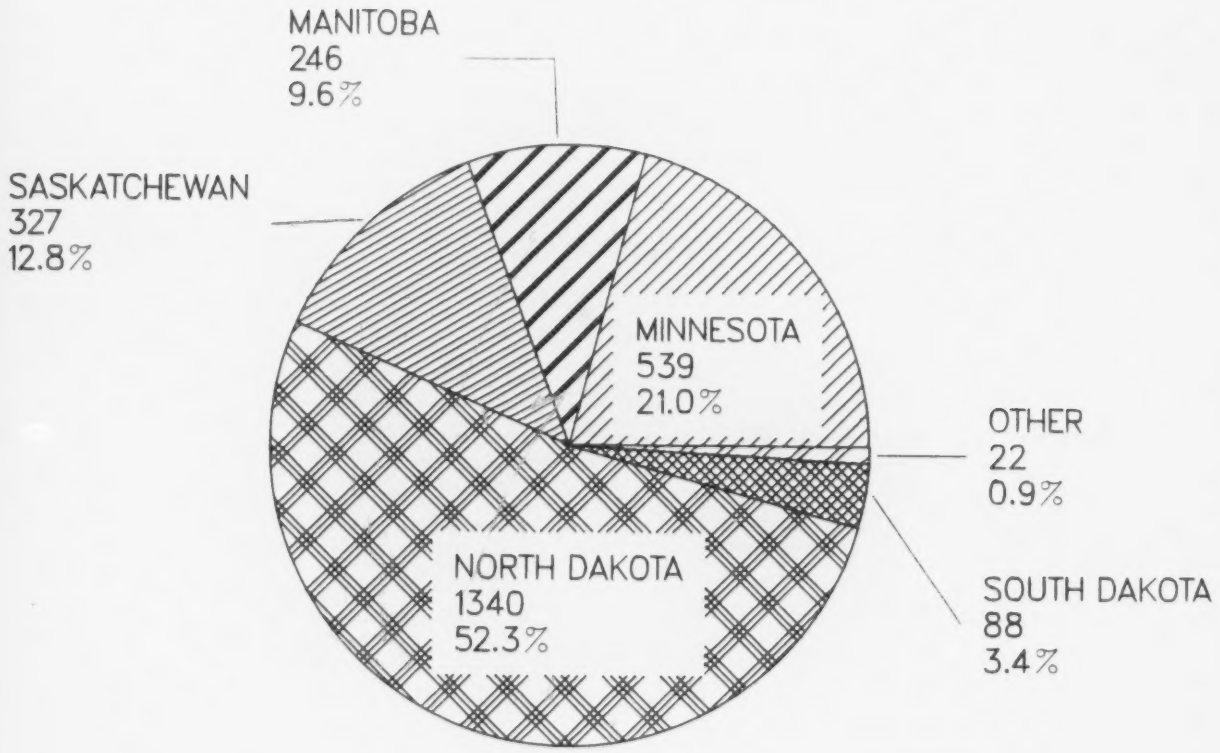
Induced Terminations

In 1987, 2,562 induced terminations were reported in North Dakota. Approximately 52 percent of these terminations were state residents (Table 4.1 and Figure 4.1). Of the nonresident induced terminations occurring in the state, nearly 71 percent were residents of Minnesota or the Province of Saskatchewan, Canada.

Table 4.1
Induced Termination Occurrences
by State of Residence
North Dakota, 1987

Geographic Area	Number	Percent
North Dakota	1,340	52.3
Minnesota	539	21.0
South Dakota	88	3.4
Manitoba	246	9.6
Saskatchewan	327	12.8
Other Areas	22	0.9
Total	2,562	100.0

Figure 4.1
Induced Termination Occurrences
by State of Residence
North Dakota, 1987



Age and Race of Female

In 1987, 35.2 percent of all resident induced terminations were to women ages 20-24, while 28.7 percent were women ages 15-19 (Table 4.2).

Other Social Characteristics

Tables 4.3 and 4.4 portray age of woman by marital status and education of woman, respectively. Approximately 80 percent of all North Dakota residents having induced terminations were not married at the time of the termination. Regarding education, 53.7 percent of the women were educated at the level grades 10-12, while 39.9 percent were educated within the level 1-4 years of college.

Table 4.2
Resident Induced Terminations
by Age and Race of Female
North Dakota, 1987

Age of Female	Total		White		Native American		Other	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Under 15 Years	10	0.7	9	0.7	1	2.3	--	--
15-19 Years	385	28.7	366	28.9	13	29.5	6	19.4
20-24 Years	472	35.2	445	35.2	14	31.8	13	41.9
25-29 Years	258	19.3	242	19.1	10	22.7	6	19.4
30-34 Years	129	9.6	122	9.6	3	6.8	4	12.9
35-39 Years	69	5.1	65	5.1	2	4.5	2	6.5
40-44 Years	13	1.0	13	1.0	--	--	--	--
45 Years and Over	1	0.0	1	0.0	--	--	--	--
Not Stated	3	0.0	2	0.0	1	0.0	--	--
Total	1,340	100.0	1,265	100.0	44	100.0	31	100.0

Table 4.3
Resident Induced Terminations
by Age and Marital Status of Female
North Dakota, 1987

Age of Female	Total	Married	Not Married	Not Stated
Under 15 Years	10	--	10	--
15-19 Years	385	10	375	--
20-24 Years	472	81	388	3
25-29 Years	258	80	178	--
30-34 Years	129	45	84	--
35-39 Years	69	38	31	--
40-44 Years	13	10	3	--
45 Years and Over	1	1	--	--
Not Stated	3	1	1	1
Total	1,340	266	1,070	4

Table 4.4
Resident Induced Terminations by
Age and Education of Female
North Dakota, 1987

Age of Female	Total	Grades 1-9	Grades 10-12	1-4 Years of College	5+ Years of College	Not Stated
Under 15 Years	10	9	1	--	--	--
15-19 Years	385	23	284	76	--	2
20-24 Years	472	5	202	255	8	2
25-29 Years	258	1	131	112	9	5
30-34 Years	129	1	64	53	7	4
35-39 Years	69	--	31	29	6	3
40-44 Years	13	--	3	8	2	--
45 Years and Over	1	--	--	1	--	--
Not Stated	3	--	3	--	--	--
Total	1,340	39	719	534	32	16

Other General Characteristics

Of the induced terminations reported in North Dakota, suction curettage was the primary procedure utilized in all reported pregnancy terminations (Table 4.5).

Complications of termination were reported in 8 (0.6 percent) of the state's 1,340 resident induced terminations (Table 4.6).

Table 4.7 depicts resident induced terminations by age of woman and gestation period. The median gestation period for induced terminations was approximately 8 weeks.

Table 4.5
Resident Induced Terminations
by Age of Female and Primary Procedure
North Dakota, 1987

Age of Female	Total	Suction Curettage
Under 15 Years	10	10
15-19 Years	385	385
20-24 Years	472	472
25-29 Years	258	258
30-34 Years	129	129
35-39 Years	69	69
40-44 Years	13	13
45 Years and Over	1	1
Not Stated	3	3
Total	1,340	1,340

Table 4.6
Resident Induced Terminations by
Age of Female and Complications of Termination
North Dakota, 1987

Age of Female	Total	None	Infection	Retained Products	Other	Not Stated
Under 15 Years	10	10	--	--	--	--
15-19 Years	385	383	1	--	1	--
20-24 Years	472	470	--	1	--	1
25-29 Years	258	255	1	--	1	1
30-34 Years	129	126	1	--	1	1
35-39 Years	69	68	--	1	--	--
40-44 Years	13	13	--	--	--	--
45 Years and Over	1	1	--	--	--	--
Not Stated	3	2	--	--	--	1
Total	1,340	1,328	3	2	3	4

Table 4.7
Resident Induced Terminations by
Age of Female and Gestation Period
North Dakota, 1987

Age of Female	Gestation					
	Total	1-4 Weeks	5-8 Weeks	9-12 Weeks	13 Weeks and Over	Not Stated
Under 15 Years	10	--	5	5	--	--
15-19 Years	385	3	238	116	27	1
20-24 Years	472	8	314	121	28	1
25-29 Years	258	3	175	72	6	2
30-34 Years	129	1	104	19	3	2
35-39 Years	69	--	50	16	3	--
40-44 Years	13	--	10	2	1	--
45 Years and Over	1	--	1	--	--	--
Not Stated	3	--	1	--	1	1
Total	1,340	15	898	351	69	7

APPENDIX

Table 5.1
Live Births and Deaths, North Dakota Residents;
Marriages and Divorces,
North Dakota Occurrences, by County
1987

County	Births	Deaths	Marriages	Divorces
Adams	47	44	23	8
Barnes	171	154	92	43
Benson	155	74	43	11
Billings	14	4	7	1
Bottineau	123	108	51	22
Bowman	51	44	27	8
Burke	31	45	20	3
Burleigh	849	360	549	268
Cass	1,532	602	881	414
Cavalier	83	85	39	11
Dickey	85	79	38	17
Divide	34	40	15	12
Dunn	70	34	19	4
Eddy	38	44	18	8
Emmons	56	56	30	6
Foster	69	50	29	6
Golden Valley	38	18	18	3
Grand Forks	1,329	467	640	329
Grant	44	30	16	5
Griggs	47	44	22	5
Hettinger	62	42	24	5
Kidder	56	35	24	5
LaMoure	67	58	27	2
Logan	35	27	18	2
McHenry	76	74	37	7
McIntosh	53	60	24	3
McKenzie	134	61	35	12
McLean	147	101	64	26
Mercer	208	50	62	34
Morton	366	191	162	57
Mountrail	101	78	42	12
Nelson	54	65	25	9
Oliver	36	15	11	4
Pembina	129	102	48	17
Pierce	64	99	46	8
Ramsey	199	158	110	48
Ransom	76	96	40	21
Renville	35	30	17	2
Richland	254	197	124	51
Rolette	301	107	41	10
Sargent	60	57	22	13
Sheridan	28	18	8	5
Sioux	136	26	35	1
Slope	12	3	5	1
Stark	377	146	204	85
Steele	36	30	13	5
Stutsman	333	202	167	87
Towner	64	35	22	6
Traill	110	112	54	34
Walsh	193	176	110	48
Ward	1,207	378	634	330
Wells	79	84	26	4
Williams	349	181	170	113
Total	10,303	5,476	5,028	2,251

Table 5.2
Resident Deaths by Age, Gender, and Selected Causes
North Dakota, 1987

Primary Cause of Death	Age at Death																			
	Under 1		1-4		5-14		15-24		25-34		35-44		45-54		55-64		65+		All Ages	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Tuberculosis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	1
Septicemia	--	--	--	1	--	--	--	--	1	--	--	--	--	--	3	4	16	16	20	21
Viral Hepatitis	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	1	--	2
All Other Infectious and Parasitic Diseases	--	--	--	1	--	--	--	--	--	2	1	--	2	--	2	--	3	5	8	8
Malignant Neoplasms	--	--	1	--	3	5	2	2	9	12	7	19	42	23	137	92	521	392	722	545
Benign Neoplasms	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	1	5	5	8	6
Diabetes	--	--	--	--	--	--	1	--	--	--	5	2	--	1	2	8	45	64	53	75
Nutritional Deficiencies	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	6	6	6
Anemias	--	--	--	--	--	1	--	--	--	--	--	1	--	--	--	--	3	1	3	3
Meningitis	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1
Heart Disease	2	--	1	2	--	--	3	2	8	3	18	2	53	16	147	38	834	819	1066	882
Hypertension With or Without Renal Disease	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7	8	7	8
Cerebrovascular Disease	--	--	--	--	--	--	--	1	--	2	2	--	6	5	16	10	182	245	206	263
Atherosclerosis	--	--	--	--	--	--	--	--	--	--	--	--	1	--	3	--	37	49	41	49
Other Arterial Disease	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	1	36	37	39	38
Acute Bronchitis	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	1	--	1	1
Influenza and Pneumonia	--	1	--	--	--	--	1	--	--	--	1	--	2	--	--	5	76	80	80	86
Chronic Obstructive Pulmonary Disease	1	--	--	--	--	1	--	--	--	--	--	--	5	2	13	7	132	30	151	40
Ulcer	--	--	--	--	--	--	--	--	--	--	1	--	--	--	1	1	8	5	10	6
Appendicitis	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	1	--
Hernia	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	9	11	11	11
Cirrhosis	--	--	--	--	--	--	--	1	--	1	3	--	5	2	6	6	14	10	28	20
Cholelithiasis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	5	5	5	6
Nephritis and Nephrosis	--	--	--	--	--	--	--	--	--	--	1	--	--	3	--	2	34	23	35	28
Kidney Infection	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	6	2	6
Complications of Pregnancy	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	1
Congenital Anomalies	11	12	1	--	1	--	1	1	1	1	--	--	2	--	--	2	--	2	17	18
Perinatal Conditions	22	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22	17
Ill-Defined Conditions	11	4	1	--	--	--	--	--	1	1	1	--	--	--	2	1	28	28	44	34
All Other Diseases	4	1	2	2	2	2	2	2	6	2	5	3	7	4	14	9	139	158	181	183
Traffic Accidents	--	--	--	1	10	2	25	6	15	3	12	1	11	1	8	4	14	4	95	22
All Other Accidents	1	1	4	5	8	--	15	1	8	2	7	--	6	2	14	4	24	18	87	33
Suicide	--	--	--	--	1	--	12	3	14	5	7	2	12	2	12	2	13	2	71	16
Homicide/Legal Intervention	--	--	--	1	--	--	3	2	3	1	1	--	--	--	--	1	--	--	7	5
All Other External Causes	--	--	--	--	--	--	1	--	1	--	4	--	1	--	--	--	1	--	8	--
All Causes of Death	53	37	10	14	25	11	66	21	67	36	76	30	156	62	387	199	2195	2031	3035	2441

Table 5.3
Resident Selected Causes of Death, by County
North Dakota Residents, 1987

County	All Causes	Residual	Malignant Neoplasms	Diabetes	Diseases of the Heart	Cerebro-vascular Disease	Athero-sclerosis	Other Diseases of Arteries	Influenza/ Pneumonia	COPD	Accidental Deaths	Suicide
Adams	44	6	15	--	10	7	1	--	2	2	1	--
Barnes	154	23	42	5	47	22	2	3	1	3	5	1
Benson	74	8	11	1	34	9	2	--	--	1	7	1
Billings	4	1	2	--	--	--	--	--	1	--	--	--
Bottineau	108	23	18	1	36	9	--	3	10	2	5	1
Bowman	44	3	14	3	14	6	1	1	1	--	1	--
Burke	45	5	14	2	12	2	--	2	3	3	2	--
Burleigh	360	65	88	12	122	20	8	7	7	11	16	4
Cass	602	106	142	9	192	63	11	6	16	29	19	9
Cavalier	85	9	27	--	38	3	--	--	1	--	5	2
Dickey	79	10	22	1	32	1	--	1	5	5	3	1
Divide	40	10	11	3	6	--	--	1	5	2	1	1
Dunn	34	4	8	1	10	1	--	2	1	--	7	--
Eddy	44	2	10	1	16	3	--	3	2	3	4	--
Emmons	56	4	16	3	23	3	--	1	--	3	2	1
Foster	50	5	15	1	7	13	4	--	--	3	1	1
Golden Valley	18	--	4	--	5	2	--	1	1	2	2	1
Grand Forks	467	82	103	10	155	33	8	9	15	22	22	8
Grant	30	8	4	--	10	2	2	--	--	2	2	--
Griggs	44	6	7	--	21	3	--	--	2	3	2	--
Hettinger	42	6	11	--	17	4	1	1	1	--	1	--
Kidder	35	3	7	--	19	2	--	--	1	--	3	--
LaMoure	58	4	15	2	19	7	2	2	2	1	3	1
Logan	27	2	9	1	9	2	--	--	--	4	--	--
McHenry	74	5	15	--	32	11	1	--	2	3	4	1
McIntosh	60	11	17	1	19	6	--	1	2	--	3	--
McKenzie	61	7	9	3	22	4	2	--	3	2	8	1
McLean	101	15	24	6	40	7	--	2	--	1	6	--
Mercer	50	5	7	2	19	5	--	--	2	3	5	2
Morton	191	23	51	1	64	23	3	4	4	5	6	7
Mountrail	78	11	21	1	21	9	2	--	4	3	4	2
Nelson	65	7	19	--	29	6	--	--	2	2	--	--
Oliver	15	2	5	--	4	2	--	--	--	1	--	1
Pembina	102	15	18	--	48	14	2	1	--	2	1	1
Pierce	99	16	23	1	43	6	3	--	3	2	1	1
Ramsey	158	16	42	1	60	21	2	1	4	4	4	3
Ransom	96	10	20	2	43	8	1	3	1	5	3	--
Renville	30	8	7	--	12	1	--	--	2	--	--	--
Richland	197	32	49	4	63	17	1	3	15	2	9	2
Rolette	107	16	19	--	47	6	2	--	2	6	6	3
Sargent	57	5	10	4	29	3	1	--	3	2	--	--
Sheridan	18	1	5	--	9	--	1	--	--	1	--	1
Sioux	26	11	1	--	9	--	--	--	--	1	3	1
Slope	3	--	1	1	--	--	--	--	1	--	--	--
Stark	146	24	37	4	48	11	3	2	4	4	6	3
Steele	30	6	7	--	6	2	--	1	5	2	--	1
Stutsman	202	30	39	5	79	14	6	2	4	8	11	4
Towner	35	4	7	--	13	2	1	--	3	1	3	1
Traill	112	13	27	2	40	13	4	1	3	1	7	1
Walsh	176	30	36	5	63	12	2	1	7	6	13	1
Ward	378	71	82	16	131	25	5	6	8	14	11	9
Wells	84	5	15	5	28	13	2	5	2	3	4	2
Williams	181	22	39	8	73	11	4	1	5	6	5	7
Total	5476	816	1267	128	1948	469	90	77	166	191	237	87